Wiring Diagrams

UNITS PRODUCED AFTER APRIL 1994

(Includes Motormaster® III Head Pressure Control Information)

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044-084	All	Component Arrangement	500637	2
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LEGEND

CCTM — Carrier Communications Temperature Monitor

*Unit 38AH044 part wind only.
†Optional single-circuit models will display suffix codes DA, EA, FA, or GA.

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

OPERATING SEQUENCE

Timer Functions — (See Timer Cycle, Fig. 1.) Each compressor is operated by an independent timer motor which allows for the independent operation of each refrigeration circuit.

NOTE: Optional single-circuit units have one timer motor which controls the lead compressor. Lag compressor is controlled by CCPS (Capacity Control Pressure Switch).

SWITCH A — The timer motor is energized through contacts A-A1 or A-A2. This establishes the Time Guard® function which prevents compressor short-cycling. Start of compressor is delayed approximately 5.5 minutes after shutdown. Compressor B1 start-up is delayed 60 seconds after the T2 call-for-cooling by a time-delay relay. This prevents both compressors from starting at the same time.

SWITCH B — The compressor is initially energized through contacts B-B1.

SWITCH D — Contacts D-D1 provide a 2.5-minute bypass of the low-pressure switch at start-up for winter-start control. On single-circuit units, contacts D-D2 control start-up of compressor A2.

SWITCH E — Contacts E-E1 provide a 120-second bypass of the oil pressure switch at start-up. If oil pressure does not build to the required minimum pressure in 120 seconds, the compressor shuts down and the control circuit locks out.

Control Circuit Reset — The control circuit locks out if the unit shuts down because of low oil pressure or excessive high-side pressure. To reset the control circuit, open and close the fan circuit breaker (FCB). This will reset the timer motor, and the unit will restart under Time Guard® control. If LPS is not closed, timer will not function. LPS must be closed at time of start-up. At start-up, if the low-pressure switch (LPS) is not made after 2.5 minutes, the unit shuts down. When the pressure is sufficient for the LPS to cut in, the control circuit is energized automatically and start-up proceeds under Time Guard control.

Unit Operation — Circuits A1 and B1 are controlled by independent circuitry. It is therefore possible to maintain partial cooling capability even if one compressor is inoperable.

NOTE: Single-circuit units do not have independent control circuitry.

On a call for cooling, the first-stage cooling thermostat TC1 closes, energizing the first stage of the condenser fans and timer motor TM-A (TM for single-circuit units). After 12 seconds, the timer energizes lead compressor contactor C-A1 and the lead compressor starts. (Circuit A compressor is the lead on dual-circuit units, and compressor A1 is the lead on single-circuit units.) At the same time, solenoid drop relay SDR2 energizes and closes its contacts, which energizes and opens liquid line solenoid valve LLS-A (LLS-A1 for single-circuit units). Circuit A (compressor A1 for single-circuit units) is now operational.

A set of bypass contacts in timer TM-A allows the circuit A compressor (compressor A1 for single-circuit units) 120 seconds to build sufficient oil pressure. If the oil pressure is insufficient after 120 seconds, circuit A (compressor A1 for single-circuit units) shuts down and must be reset manually.

A second set of bypass contacts in timer TM-A (TM for single-circuit units) allows the refrigerant circuit $2^1/_2$ minutes to build sufficient low-side pressure. This time delay is a start-up feature for low ambient conditions; no accessory is required. If refrigerant circuit pressure is insufficient to close the low-pressure switch after $2^1/_2$ minutes, the circuit A compressor (compressor A1 for single-circuit units) shuts down for 5 minutes and then automatically attempts to restart. No manual reset is required.

FOR DUAL-CIRCUIT UNITS — If circuit A is insufficient for the cooling requirements, second-stage thermostat TC2 closes to bring circuit B on line. Circuit B follows the same sequence of operation as circuit A, except a relay delays circuit B compressor start-up for 40 seconds after a call for cooling. Because circuit A has a 12-second delay after TC1 closes, and circuit B has a 40-second delay after TC2 closes, the two compressors cannot start at the same time.

FOR OPTIONAL SINGLE-CIRCUIT UNITS — If compressor A1 is insufficient for the cooling requirements, second-stage thermostat TC2 closes, which opens liquid line solenoid valve LLS-A2. Compressor A2 starts only after the D-D2 contacts in timer TM close (approximately $2^1/_2$ minutes after compressor A1 is energized) and the suction pressure is sufficient to close capacity control pressure switches CCPS1 and CCPS2.

NOTE: Liquid line solenoid valves must be field-supplied and installed at the evaporator for both dual- and optional single-circuit units.

INDOOR-FAN OPERATION — When the fan switch on the thermostat is set for automatic operation (AUTO), the field-supplied indoor-fan contactor (IFC) is cycled with the lead compressor. If the fan switch is set at the continuous position (CONT), the IFC is energized as long as the unit power is on.

Restart After Stoppage by Safety Control — The high-pressure switch and the oil pressure switch must be reset manually by breaking the control power supply at any of the following points: control circuit fuse, fan motor circuit breaker, or the thermostat. Restart follows the Time Guard® control delay.

Stoppage by low-pressure switch results in Time Guard control delay, then unit attempts normal restart.

The compressor motor overcurrent protectors are manual-reset circuit breakers. Reset of control circuit may also be necessary.

Head Pressure Control

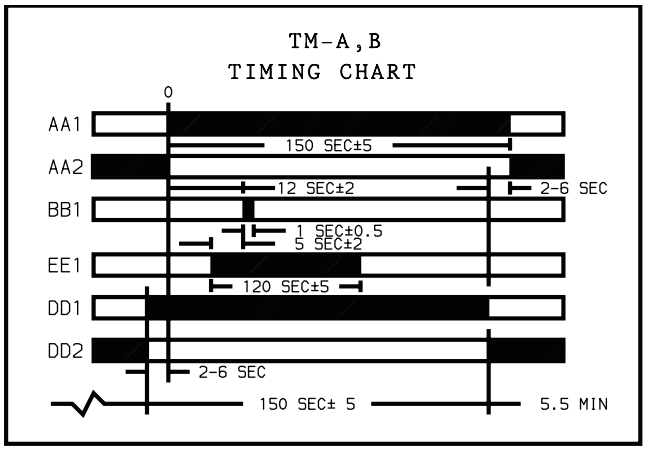
Dual-circuit units: Fan cycling pressure switches (one on each circuit) close at 264 ± 7 psig (1820 ± 48 kPag) and open at 160 ± 7 psig (869 ± 48 kPag). The fan cycling pressure switches control fans no. 3, 4, 5, and 6 on sizes 074-084.

Optional single-circuit units: Fan cycling pressure switch closes at 264 ± 7 psig (1829 ± 48 kPag) and opens at 160 ± 7 psig (869 ± 48 kPag). The fan cycling pressure switch controls fans no. 3 and 4 on all sizes. Sizes 074 and 084 also include a fan cycling temperature switch to control fans no. 5 and 6. The temperature switch is closed when the ambient temperature is above 70 F (21 C).

Independent Refrigerant Circuit Controls —

Circuits A1 and B1 are controlled by independent circuitry. It is therefore possible to maintain partial cooling capability even if one compressor or unit module is inoperable.

NOTE: Single circuit units do not have independent control circuitry.



NOTE: Black denotes closed contacts.

Fig. 1 — Timer Cycle

LEGEND (Fig. 2-15)

ATS	—	Air Temperature Switch
C	—	Compressor Contactor
CB	—	Compressor Circuit Breaker
CCPS	—	Capacity Control Pressure Switch
CH	—	Crankcase Heater
COMP	—	Compressor
CR	—	Control Relay
DU	—	Dummy Terminal
EQUIP	—	Equipment
FC	—	Fan Contactor
FCB	—	Fan Circuit Breaker
FCPS	—	Fan Cycling Pressure Switch
FIOP	—	Factory-Installed Option
FM	—	Fan Motor
FU	—	Fuse
GND	—	Ground
HPS	—	High-Pressure Switch
IFC	—	Indoor-Fan Contactor
LLS	—	Liquid Line Solenoid
LPR	—	Low-Pressure Relay
LPS	—	Low-Pressure Switch
MMSN	—	Motormaster® Sensor
NEC	—	National Electrical Code (U.S.A. Standard, NFPA 70)
NFPA	—	National Fire Protection Association
OPR	—	Oil Pressure Relay
OPS	—	Oil Pressure Switch
PL	—	Plug Assembly
PR	—	Power Relay
PRI	—	Primary
PW	—	Part-Wind Start
SDR	—	Solenoid Drop Relay
SEC	—	Secondary
TB	—	Terminal Block
TC	—	Thermostat, Cooling
TDR	—	Time-Delay Relay
TM	—	Timer Motor
TR	—	Timer Relay
TRAN	—	Transformer
U	—	Unloader
VAV	—	Variable Air Volume
XL	—	Across-the-Line Start

Terminal Block Connection

Marked Terminal

Unmarked Terminal

Unmarked Splice

Marked Wire

Factory Wiring

Field Wiring

Indicates Common Potential; Does Not Represent Wiring

NOTES (Fig. 2-8 and 11-17)

1. 208/230V units are factory wired for 230-v power supply. For 208-v power supply, connect yellow wire to terminal marked H2. For 460-v power supply, connect yellow wire to terminal marked H4. For 575-v power supply, connect yellow wire to terminal marked H2.
2. For units with 115-v controls, connect black wire to the white lead of TRAN2. For units with 230-v controls, connect black wire to the red lead of TRAN2. For units with 200-v controls, connect black wire to the blue lead of TRAN2.
3. Terminal blocks TB3, TBX1, and TBX2 are for external field control connections. Control connections are to be class 1 wiring.
4. Field-supplied components (IFC, LLS-A1 and LLS-A2) must have a maximum sealed coil rating of 30 va each (0.25 amp at 120 vac, 0.13 amp at 230 vac). Thermostats must have a minimum pilot duty rating of 120 va (1 amp at 120 vac). The fan switch must have a minimum pilot duty rating of 30 va (0.25 amp at 120 vac, 0.13 amp at 230 vac). On VAV units, the AHMS IFC_AUX and control staging contacts must have a minimum pilot duty rating of 120 VA (1 amp at 120 vac).
5. Wiring for field power supply must be rated 75 C minimum. Use copper, copper-clad aluminum, or aluminum conductors. Maximum incoming wire size for each terminal block is 500 kcmil.
6. Replacement of factory wires must be with type 105 C wire or its equivalent.
7. Factory wiring is in accordance with National Electrical Code (NEC). Field modifications or additions must be in compliance with all applicable codes.
8. Compressors and fan motors are thermally protected. Three phase motors are protected against primary single phasing conditions.
9. Line numbers on the left side of the label diagrams indicate the contact number. The numbers on the right side of the label diagrams match the contacts with their corresponding coils. A plain number indicates normally open contacts. An underlined number indicates normally closed contacts.
10. Control circuit power available for field-installed accessories.

38AH044-084 COMPONENT ARRANGEMENT (DUAL CIRCUIT)

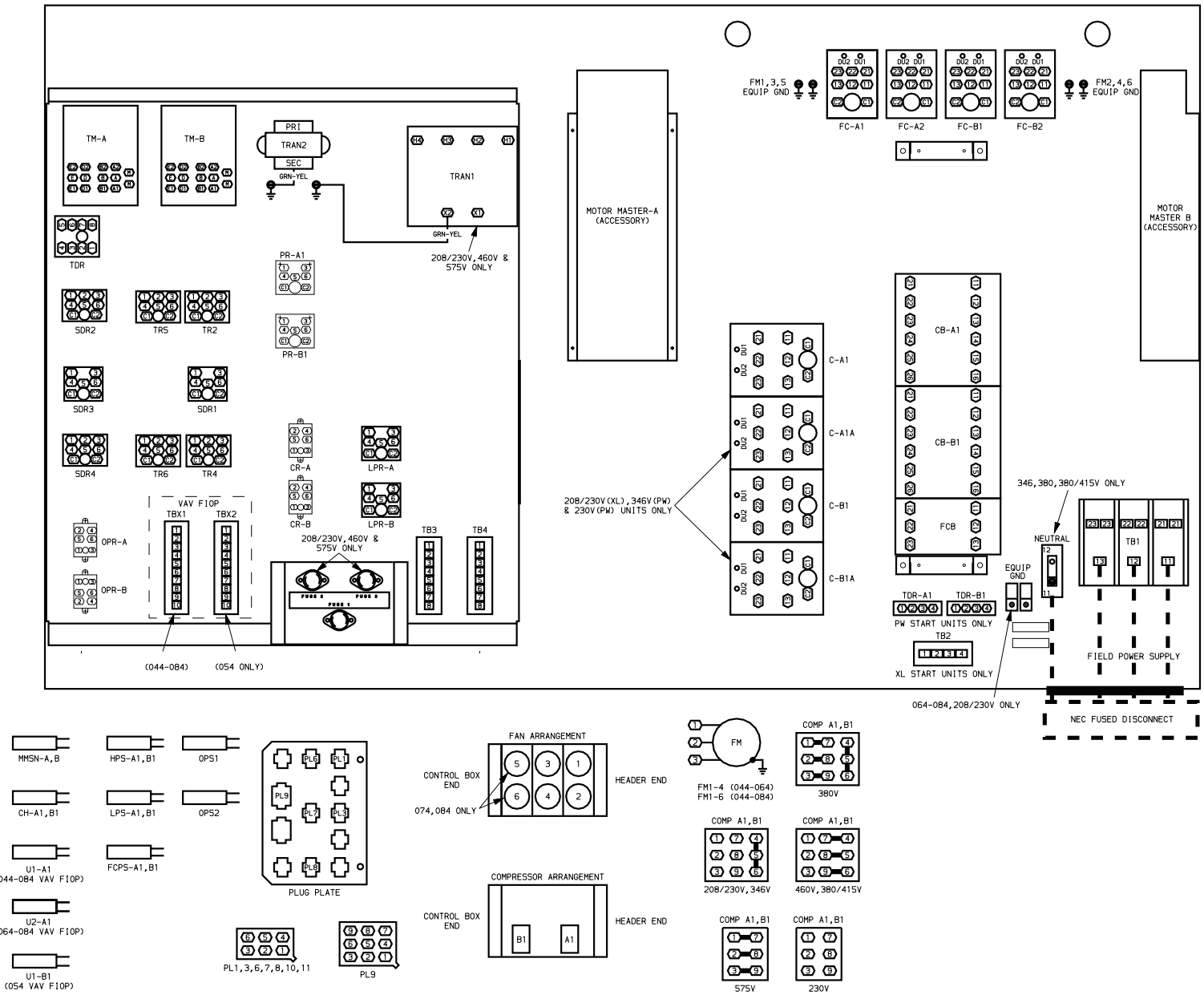


Fig. 2 — Dual-Circuit Units, Component Arrangement, All Voltages

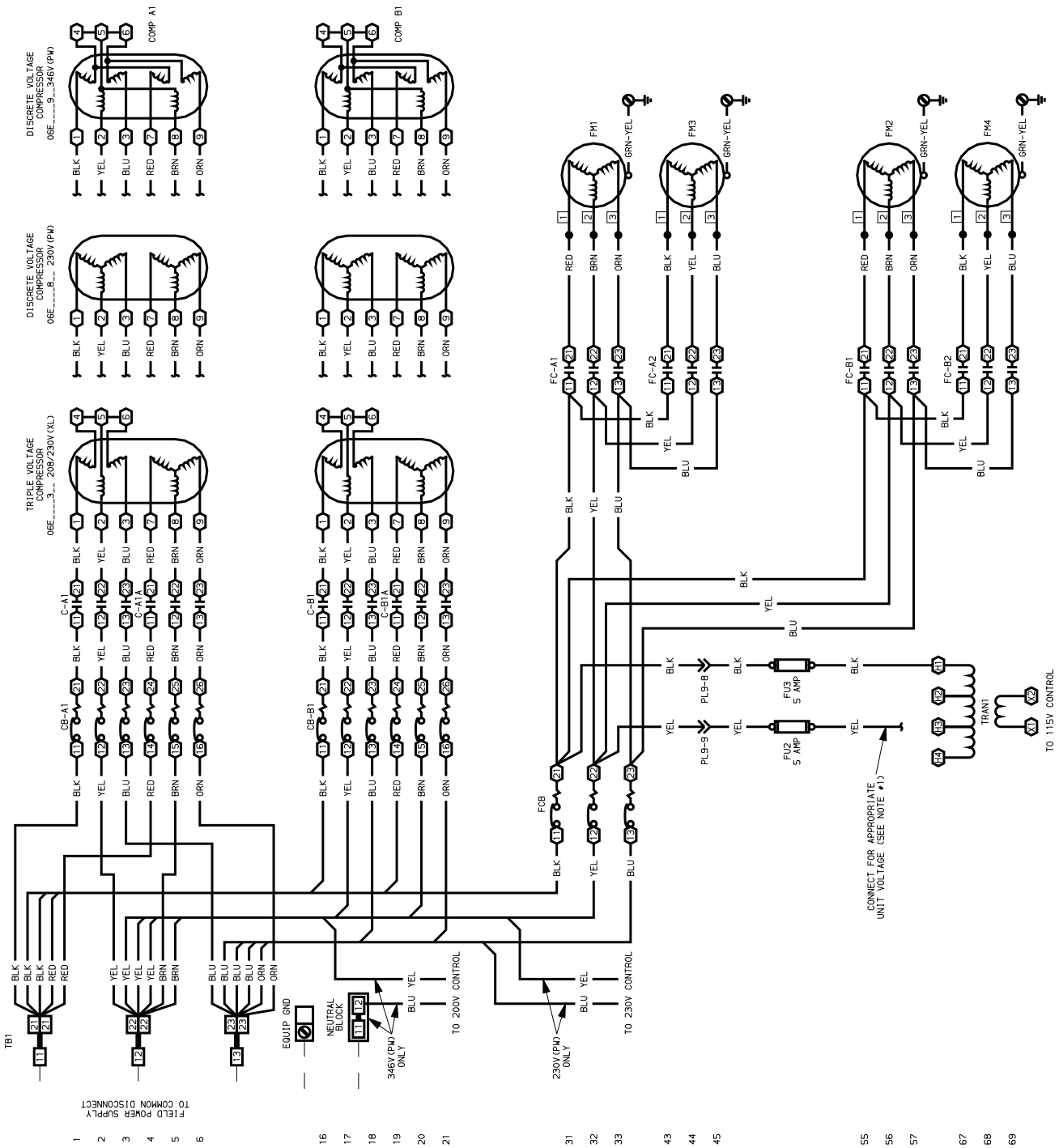


Fig. 3 — Dual-Circuit Units, Power Label Diagram — Units 38AH044-064; 208/230-3-60, 346-3-50, 230-3-50

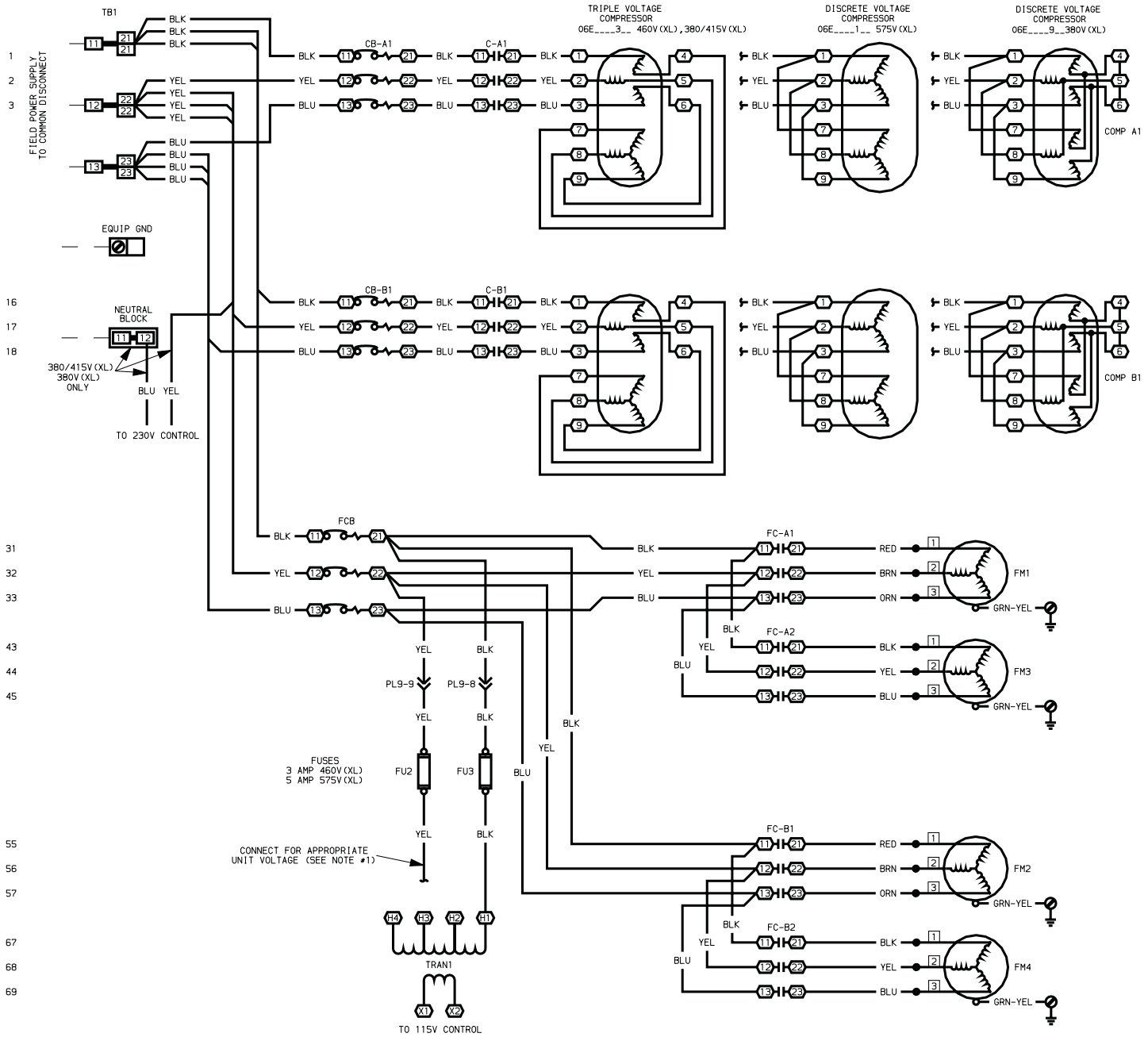


Fig. 4 — Dual-Circuit Units, Power Label Diagram — Units 38AH044-064; 460-3-60, 575-3-50, 380-3-60, 380/415-3-50

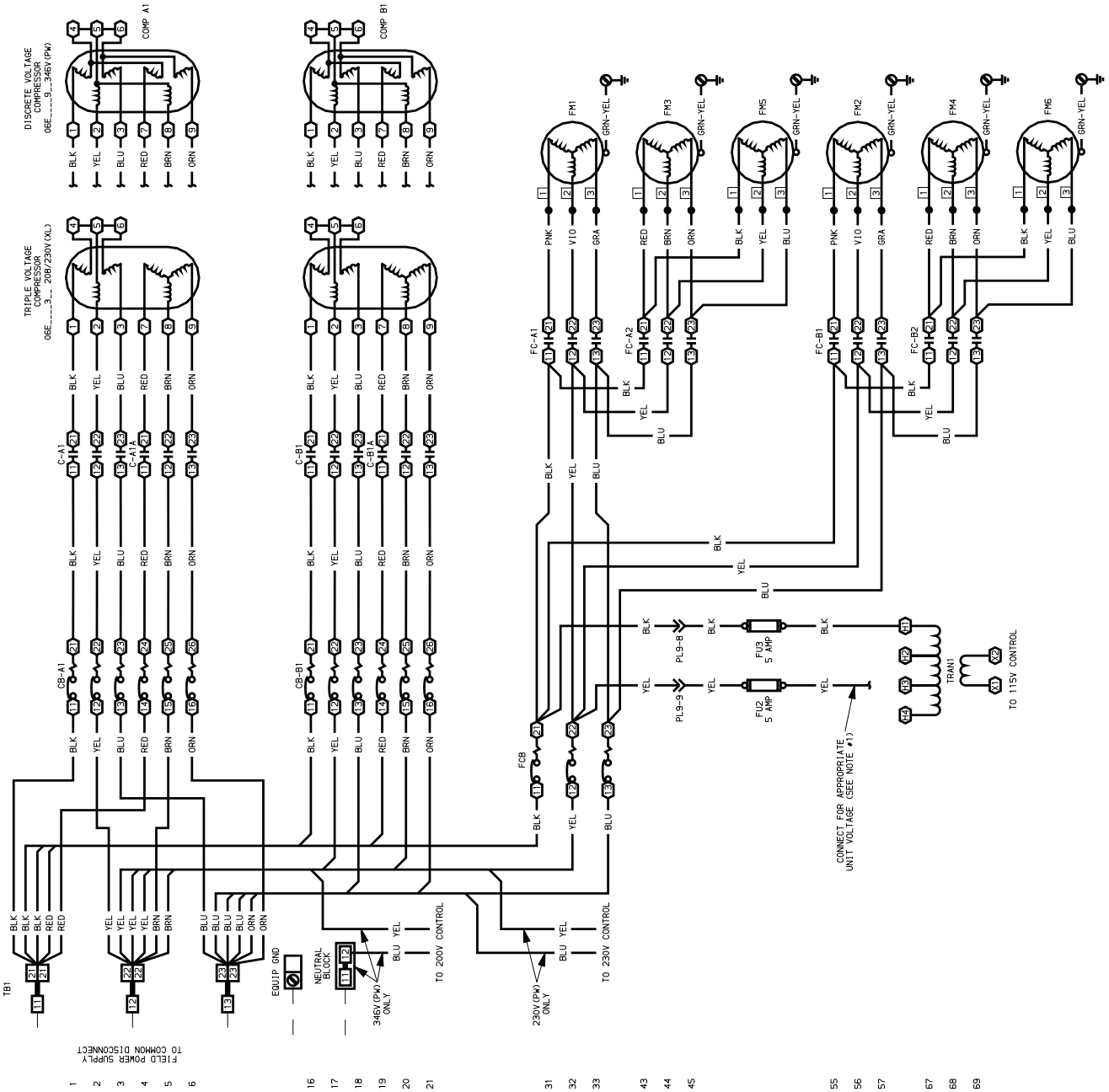


Fig. 5 — Dual-Circuit Units, Power Label Diagram — Units 38AH074,084; 208/230-3-60, 346-3-50

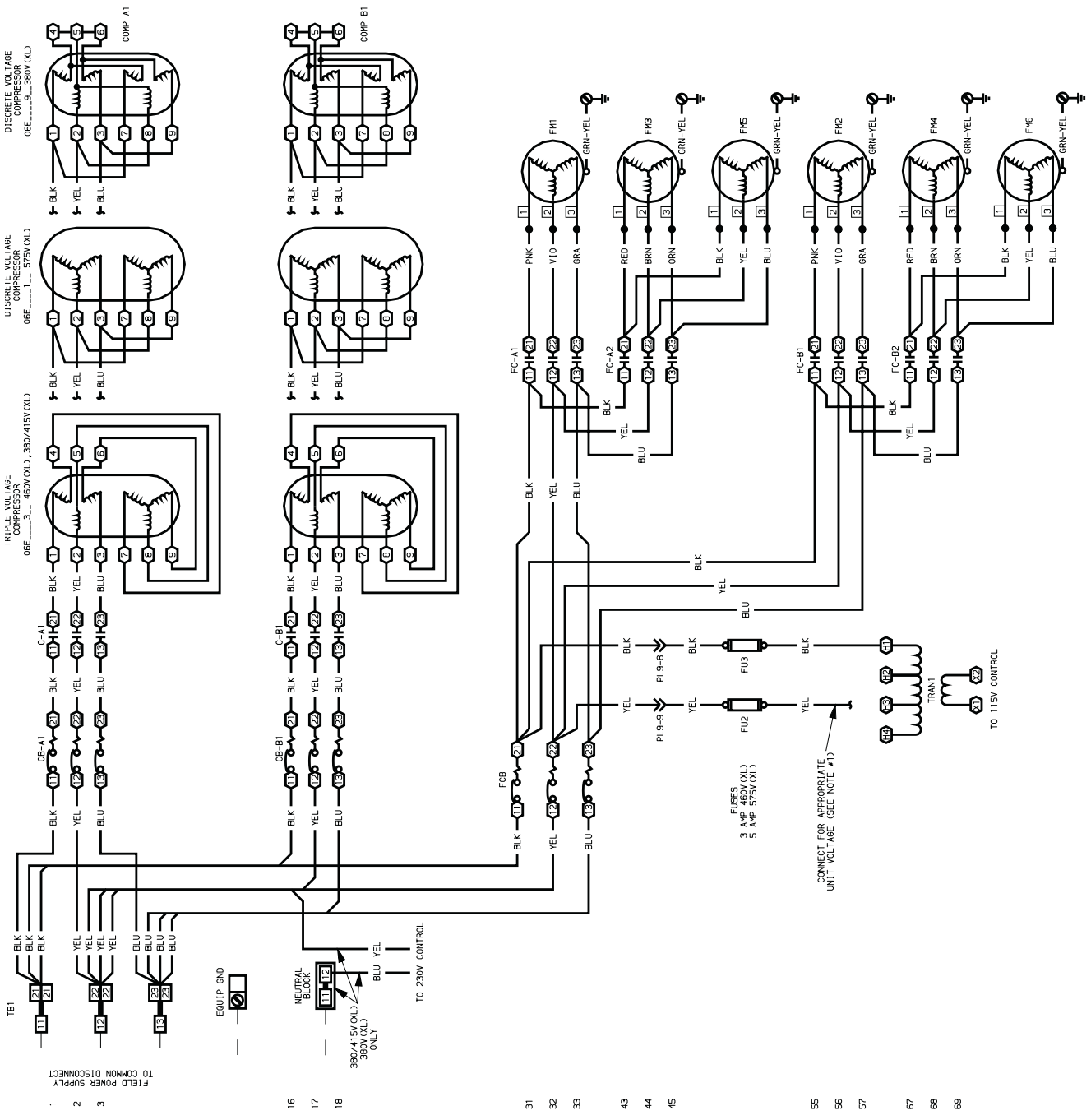
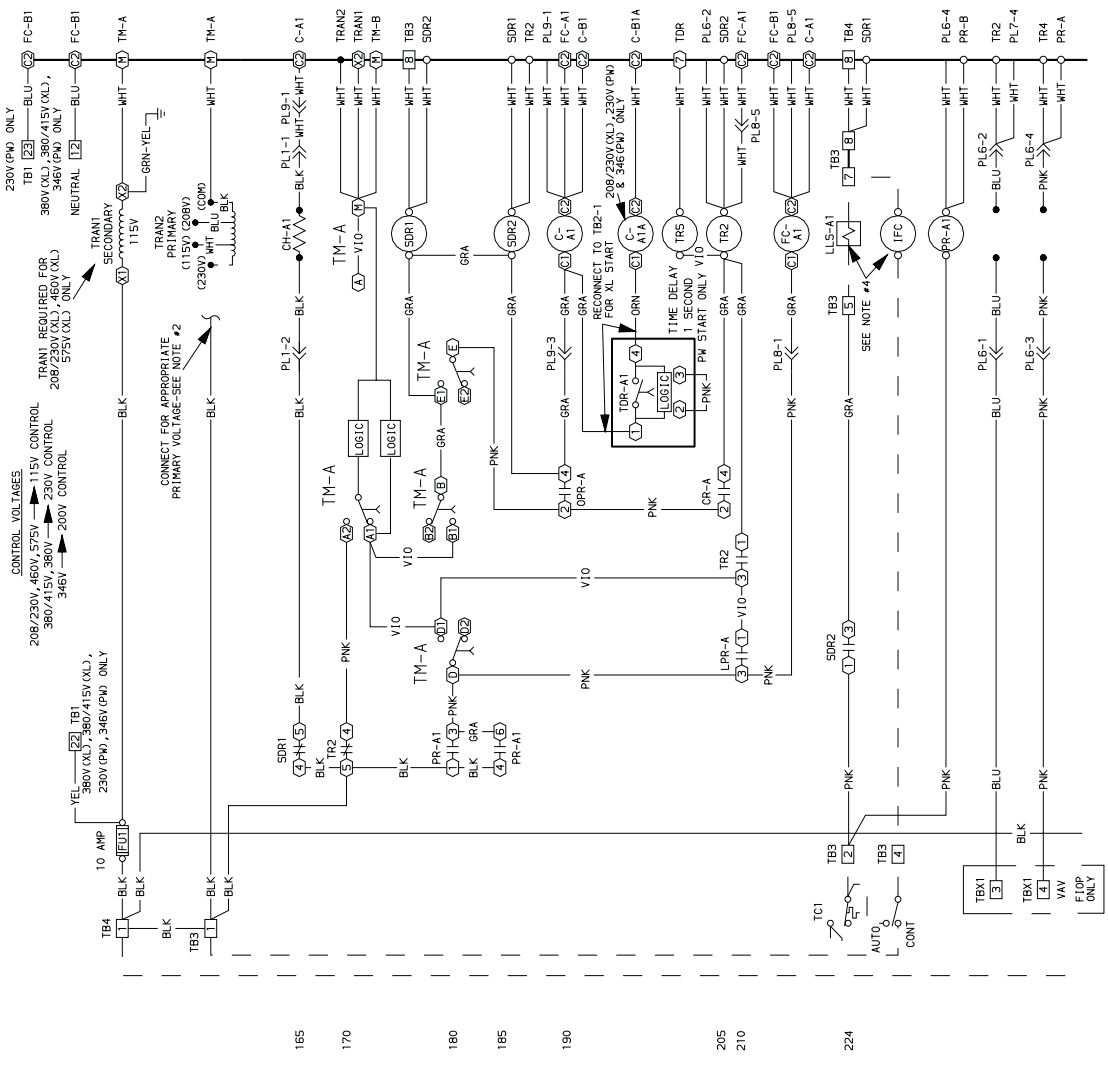


Fig. 6 — Dual-Circuit Units, Power Label Diagram — Units 38AH074,084; 460-3-60, 575-3-60, 380-3-60, 380/415-3-50


CONTROL VOLTAGES
208/230V, 460V, 575V — 115V CONTROL
380/415V, 380V — 230V CONTROL
346V — 200V CONTROL
TRAN1 REQUIRED FOR 208/230V (XL), 460V (XL) 575V (XL) ONLY
CONNECT FOR APPROPRIATE PRIMARY VOLTAGE-SEE NOTE #2
TRAN1 SECONDARY 115V
TRAN2 PRIMARY (115V) (208V) (230V)
10 AMP FU1
TB1 22 380V (XL), 380/415V (XL), 230V (PW), 346V (PW) ONLY
TB1 23 380V (XL), 380/415V (XL), 346V (PW) ONLY
NEUTRAL 12
230V (PW) ONLY
TB4
TB3
TBX1 3
TBX1 4 VAV FLOP ONLY
TC1
AUTO
CONT
SEE NOTE #4
RECONNECT TO TB2-1 FOR XL START
208/230V (XL), 230V (PW) & 346 (PW) ONLY
TIME DELAY 1 SECOND PW START ONLY
LOGIC
TM-A
TDR-A1
OPR-A
CR-A
LPR-A
PR-A1
SDR1
SDR2
TR2
TR5
TDR
LLS-A1
1FC
CH-A1
C-A1
C-B1
C-B1A
C-A1A
FC-A1
FC-B1
FC-C1
TM-A
TM-B
TRAN1
TRAN2
PL1-1
PL1-2
PL9-1
PL9-3
PL8-1
PL8-5
PL6-1
PL6-2
PL6-3
PL6-4
PL7-4
PR-A1
PR-B
TR4
TB3
TB4
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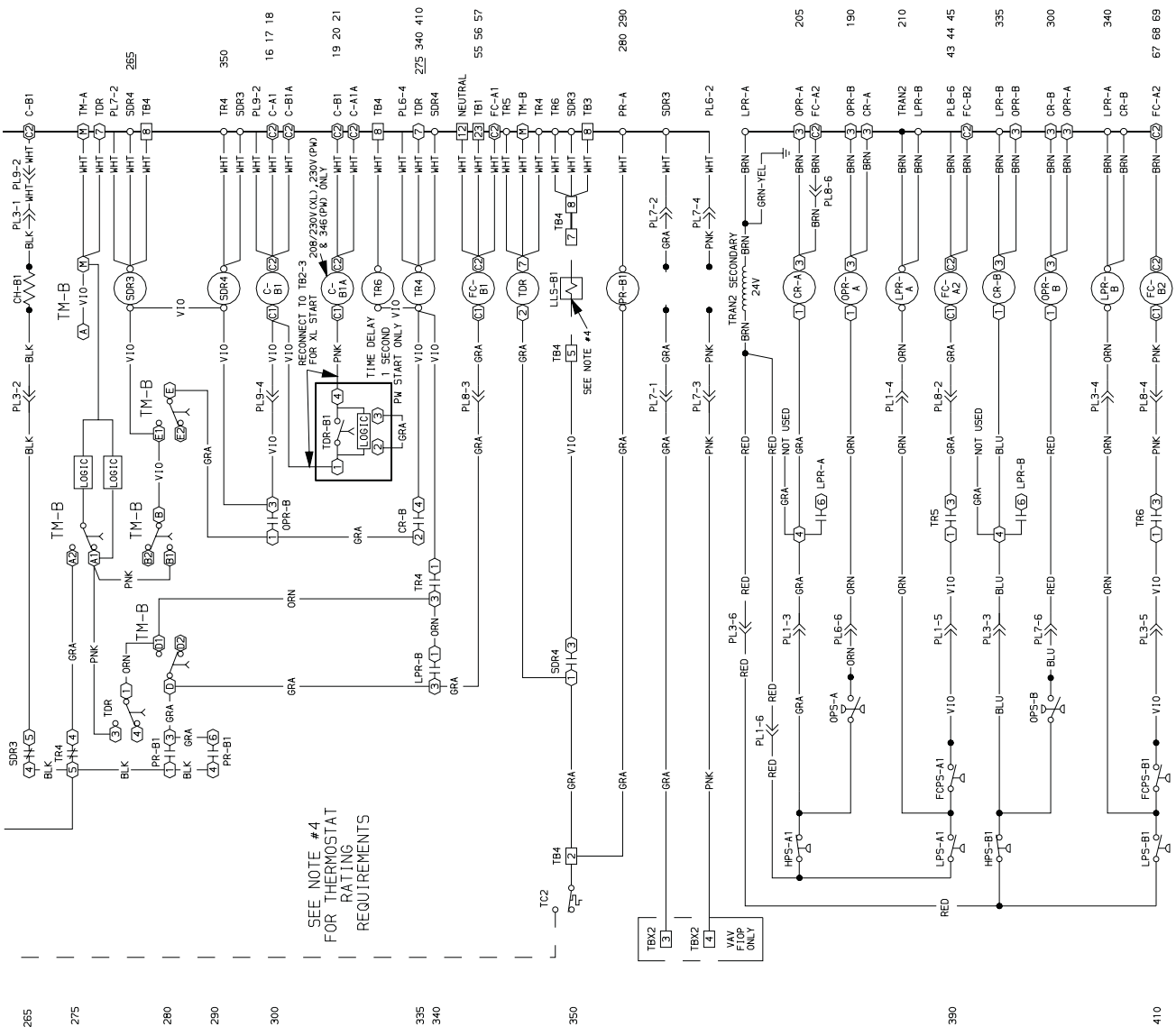
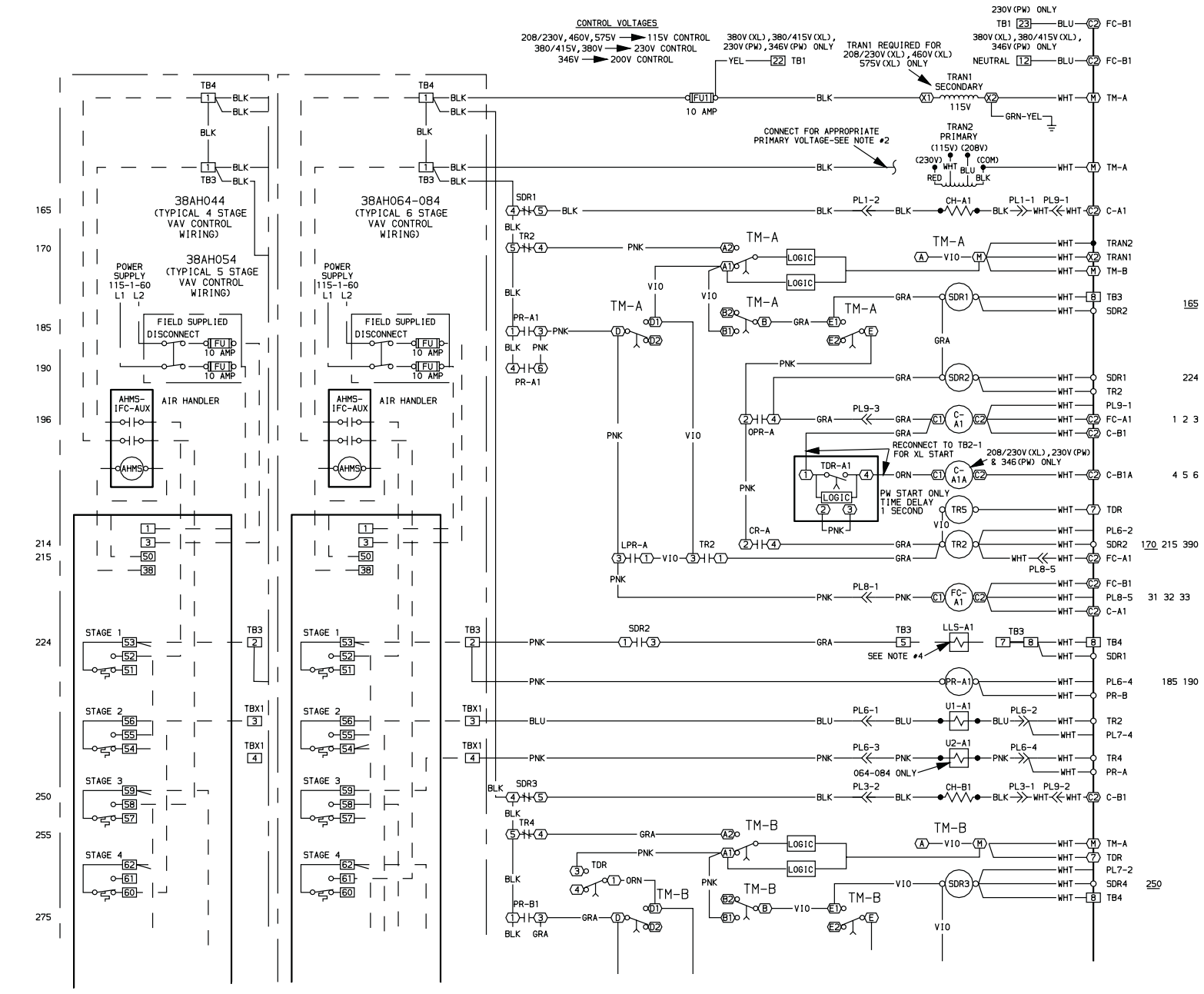


Fig. 7 — Dual-Circuit Units Control Label Diagram, All Voltages


CONTROL VOLTAGES
208/230V,460V,575V → 115V CONTROL
380/415V,380V → 230V CONTROL
346V → 200V CONTROL
380V(XL),380/415V(XL), 230V(PW),346V(PW) ONLY
TRAN1 REQUIRED FOR 208/230V(XL),460V(XL) 575V(XL) ONLY
230V(PW) ONLY
380V(XL),380/415V(XL), 346V(PW) ONLY
TRAN1 SECONDARY
115V
CONNECT FOR APPROPRIATE PRIMARY VOLTAGE-SEE NOTE #2
TRAN2 PRIMARY
(115V) (208V)
38AH044 (TYPICAL 4 STAGE VAV CONTROL WIRING)
38AH054 (TYPICAL 5 STAGE VAV CONTROL WIRING)
38AH064-084 (TYPICAL 6 STAGE VAV CONTROL WIRING)
POWER SUPPLY 115-1-60 L1 L2
FIELD SUPPLIED DISCONNECT
10 AMP
AHMS-IFC-AUX
AIR HANDLER
STAGE 1
STAGE 2
STAGE 3
STAGE 4
TM-A
TM-B
LOGIC
TDR-A1
RECONNECT TO TB2-1 FOR XL START
208/230V(XL),230V(PW) & 346(PW) ONLY
PW START ONLY TIME DELAY 1 SECOND
LLS-A1
SEE NOTE #4
U1-A1
U2-A1
064-084 ONLY
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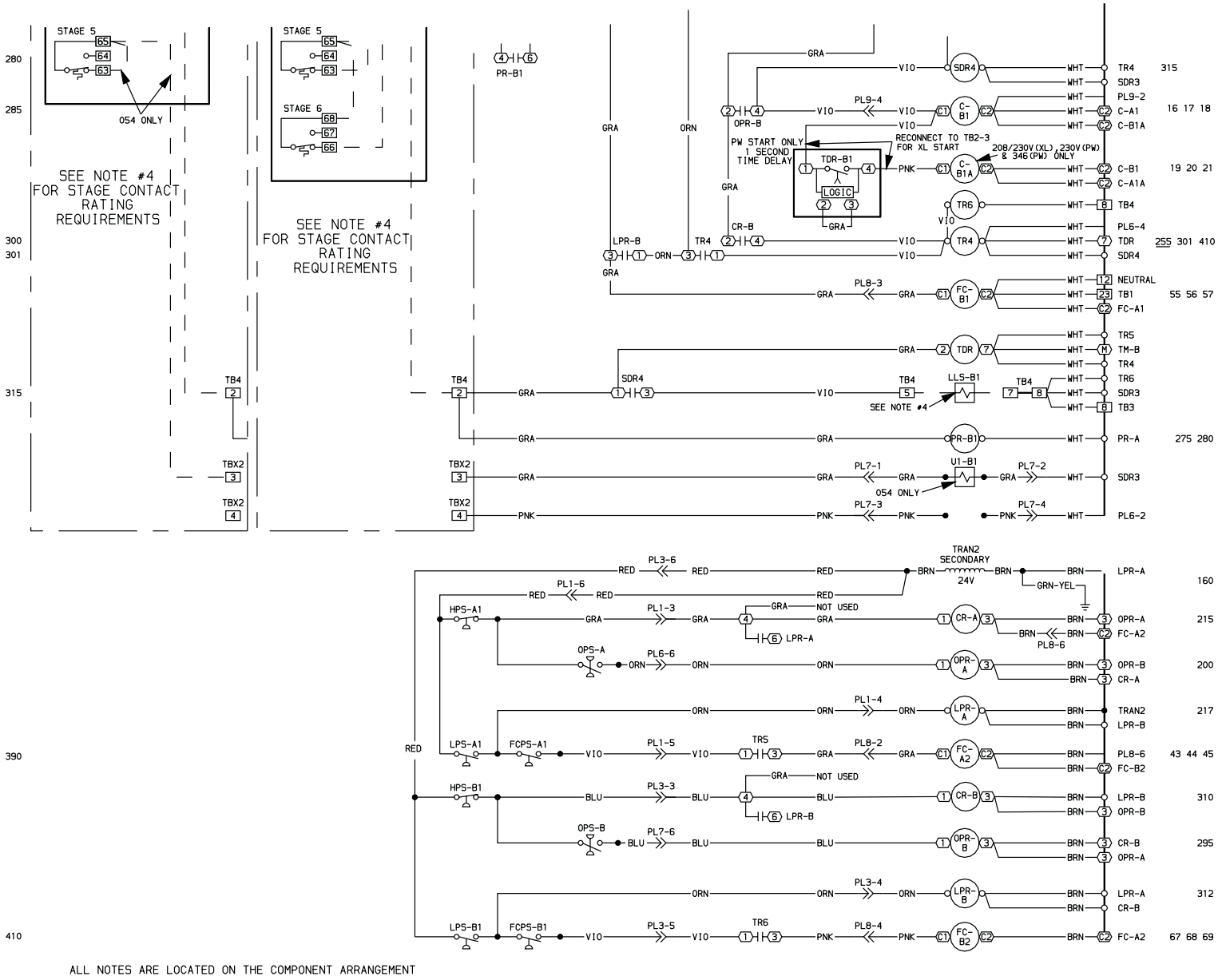
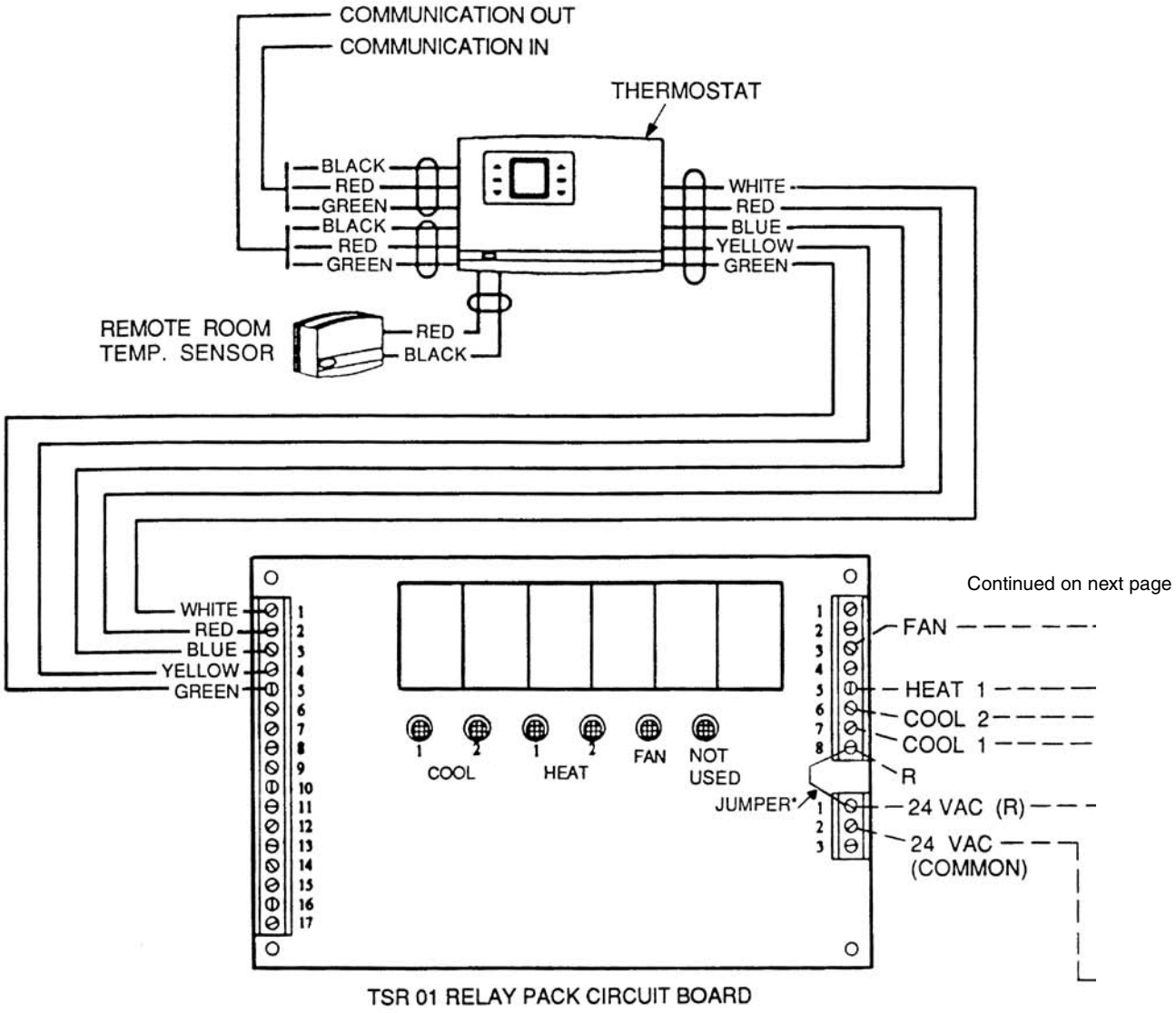


Fig. 8 — Dual-Circuit Units, Variable Air Volume Label Diagram with Typical Modupanel™ Control Wiring, All Voltages



TSR 01 RELAY PACK CIRCUIT BOARD

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LEGEND

C	— Compressor Contactor	**LLS**	— Liquid Line Solenoid
CR	— Control Relay	**SDR**	— Solenoid Drop Relay
H	— Heating Relay (field-supplied 24-v sealed coil, 10 va maximum rating)	**TB**	— Terminal Block
		TR	— Timer Relay
		———	Factory Wiring
HD	— Heating Device	– – – –	Field Wiring
IFC	— Indoor-Fan Contactor		
IFR	— Indoor-Fan Relay		

*Jumper removed only when separate 24-v transformer power source is used to power the TSR-01 relay pack.
†To control heating device and provide automatic indoor-fan operation on heating.

NOTES:
1. Liquid line solenoid valve LLS-A is used for solenoid drop on circuit A. Liquid line solenoid valve LLS-B is used for solenoid drop for circuit B.
2. Solenoid drop is a safety feature which prevents refrigerant migration to the compressor during the OFF cycle. It is recommended on all systems and required on systems where piping exceeds 75 ft in length.
3. TSR-01 relay pack uses 10 va. Internal relay contacts are rated for 1 amp/24 vac.

Fig. 9 — Control Circuit Wiring with 24-V Accessory Relay and One 2-Stage Carrier Communications Temperature Monitor, All Voltages (Dual-Circuit Units)

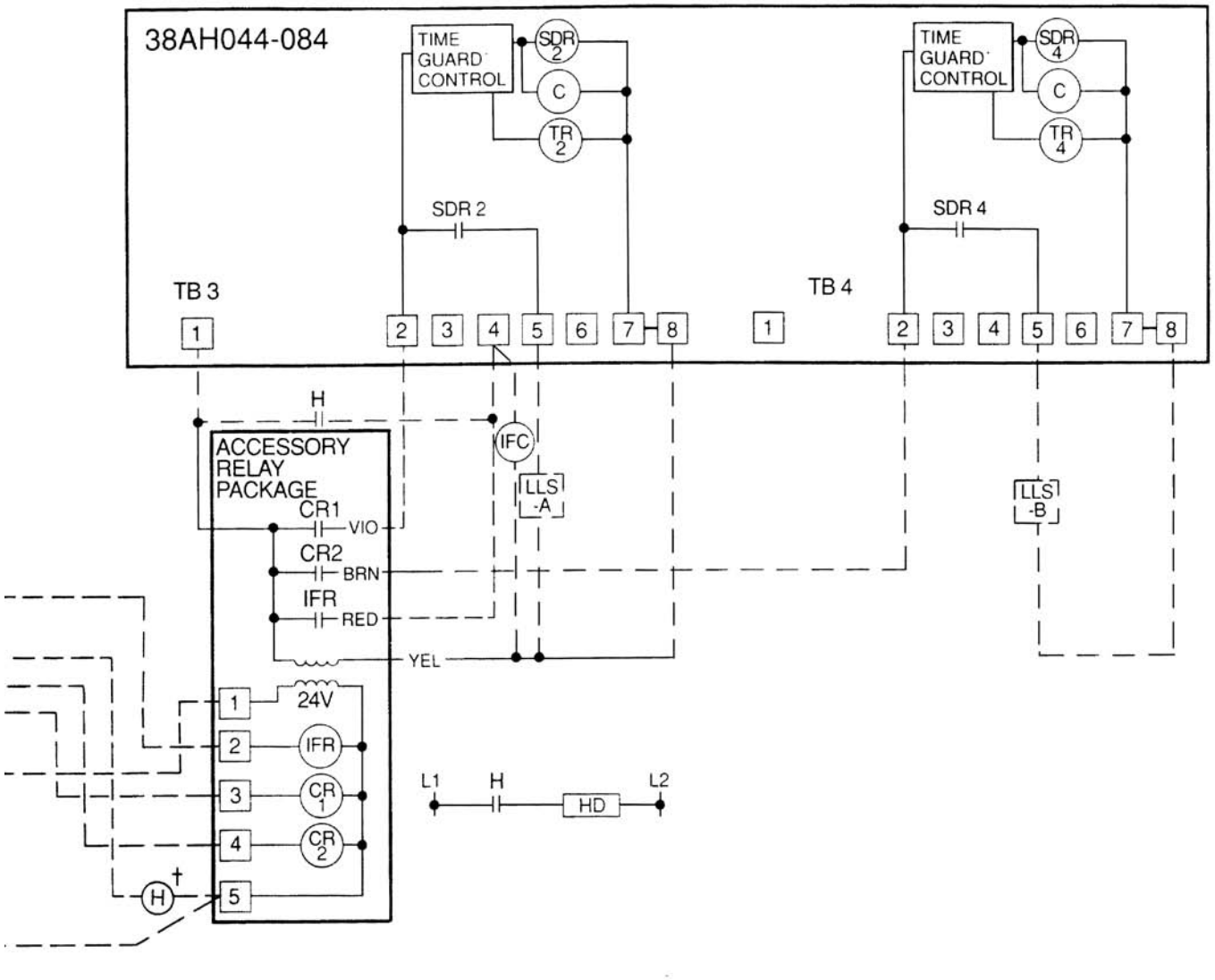

Fig. 9 — Control Circuit Wiring with 24-V Accessory Relay and One 2-Stage Carrier Communications Temperature Monitor, All Voltages (Dual-Circuit Units) (cont)

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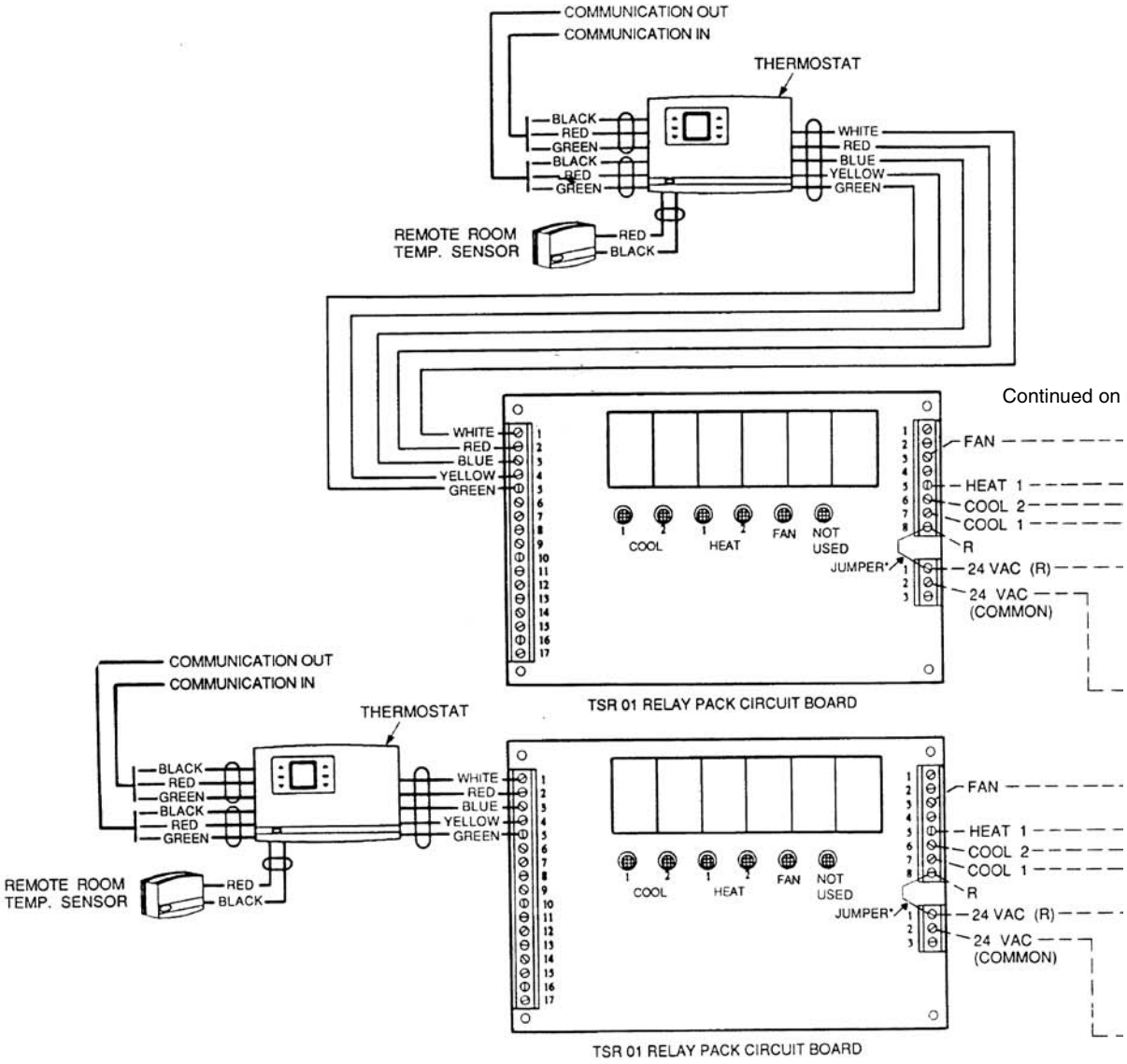


LEGEND

C	— Compressor Contactor	**LLS**	— Liquid Line Solenoid
CR	— Control Relay	**SDR**	— Solenoid Drop Relay
H	— Heating Relay (field-supplied 24-v sealed coil, 10 va maximum rating)	**TB**	— Terminal Block
		TR	— Timer Relay
		———	Factory Wiring
HD	— Heating Device	- - - -	Field Wiring
IFC	— Indoor-Fan Contactor		
IFR	— Indoor-Fan Relay		

*Jumper removed only when separate 24-v transformer power source is used to power the TSR-01 relay pack.
†To control heating device and provide automatic indoor-fan operation on heating.

NOTES:
1. Liquid line solenoid valve LLS-1 is used for solenoid drop on circuit A. Liquid line solenoid valve LLS-3 is used for solenoid drop for circuit B.
2. Solenoid drop is a safety feature which prevents refrigerant migration to the compressor during the OFF cycle. It is recommended on all systems and required on systems where piping exceeds 75 ft in length.
3. Liquid line solenoid valve LLS-2 is used for capacity control on circuit A system; LLS-4 is used for capacity control on circuit B system.
4. TSR-01 relay pack uses 10 va. Internal relay contacts are rated for 1 amp/24 vac.

Fig. 10 — Control Circuit Wiring with 24-V Accessory Relays and Two-Stage Carrier Communications Temperature Monitors, All Voltages (Dual-Circuit Units)

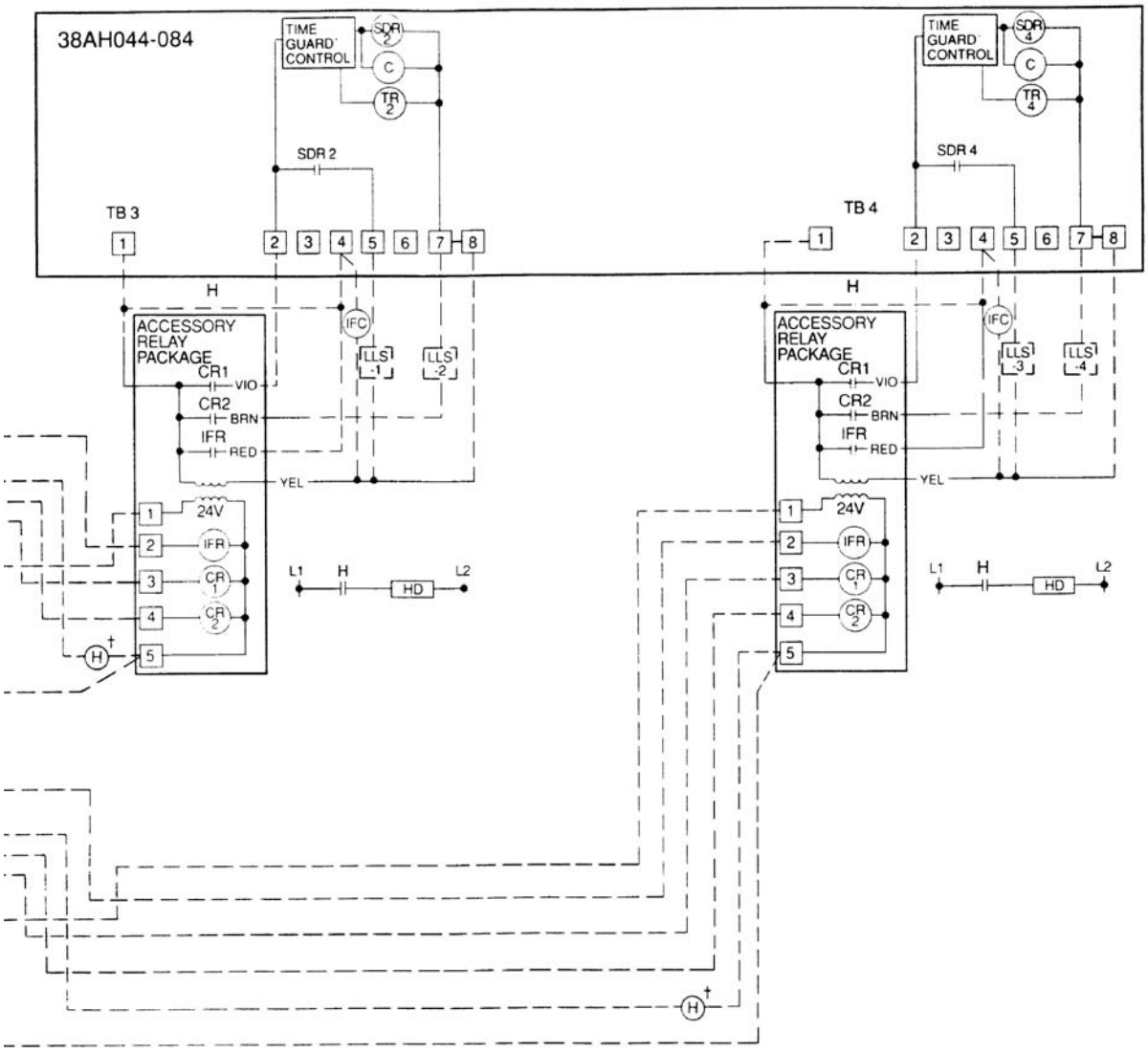


Fig. 10 — Control Circuit Wiring with 24-V Accessory Relays and Two-Stage Carrier Communications Temperature Monitors, All Voltages (Dual-Circuit Units) (cont)

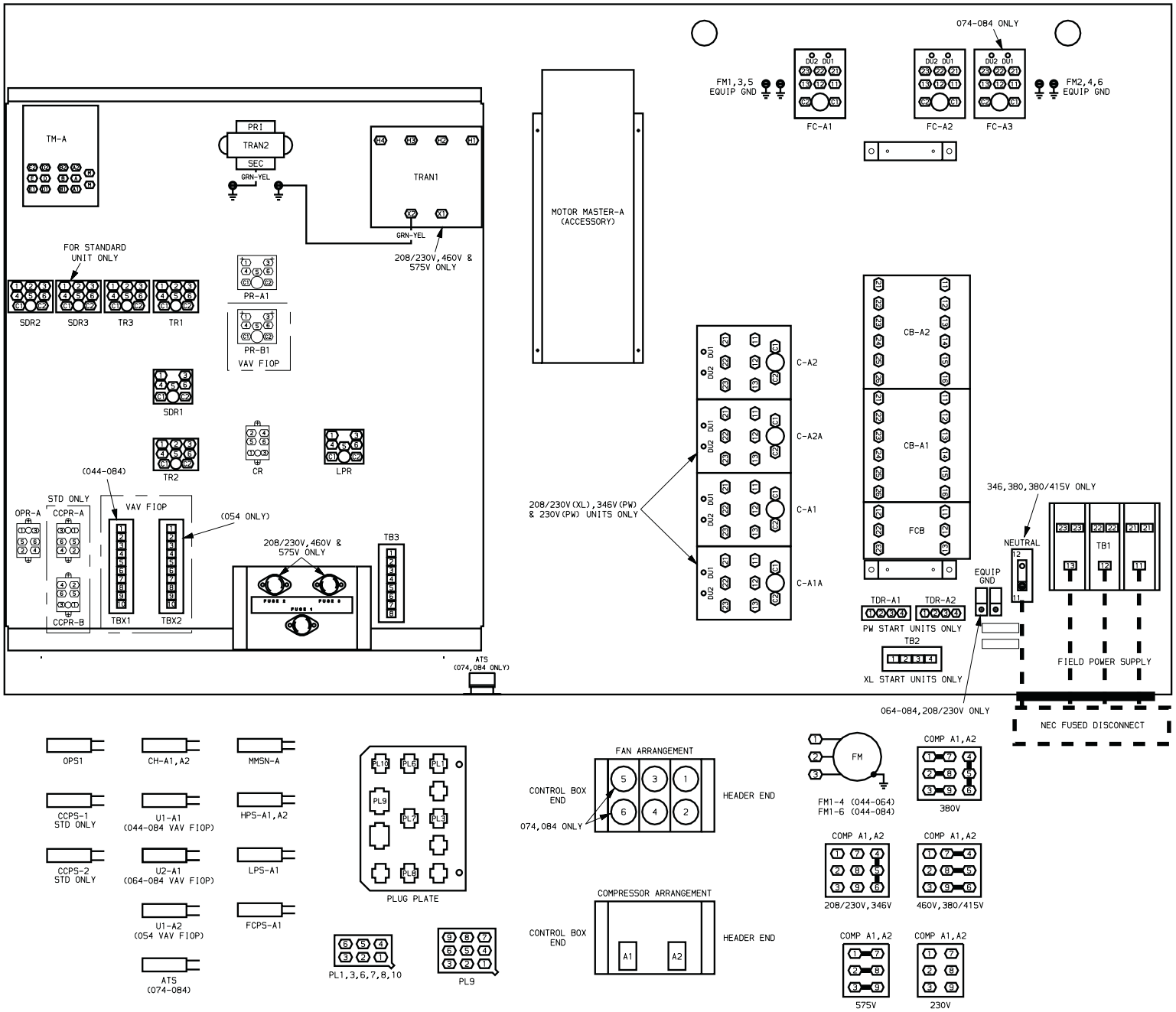


Fig. 11 — Optional Single-Circuit Units, Component Arrangement, All Voltages

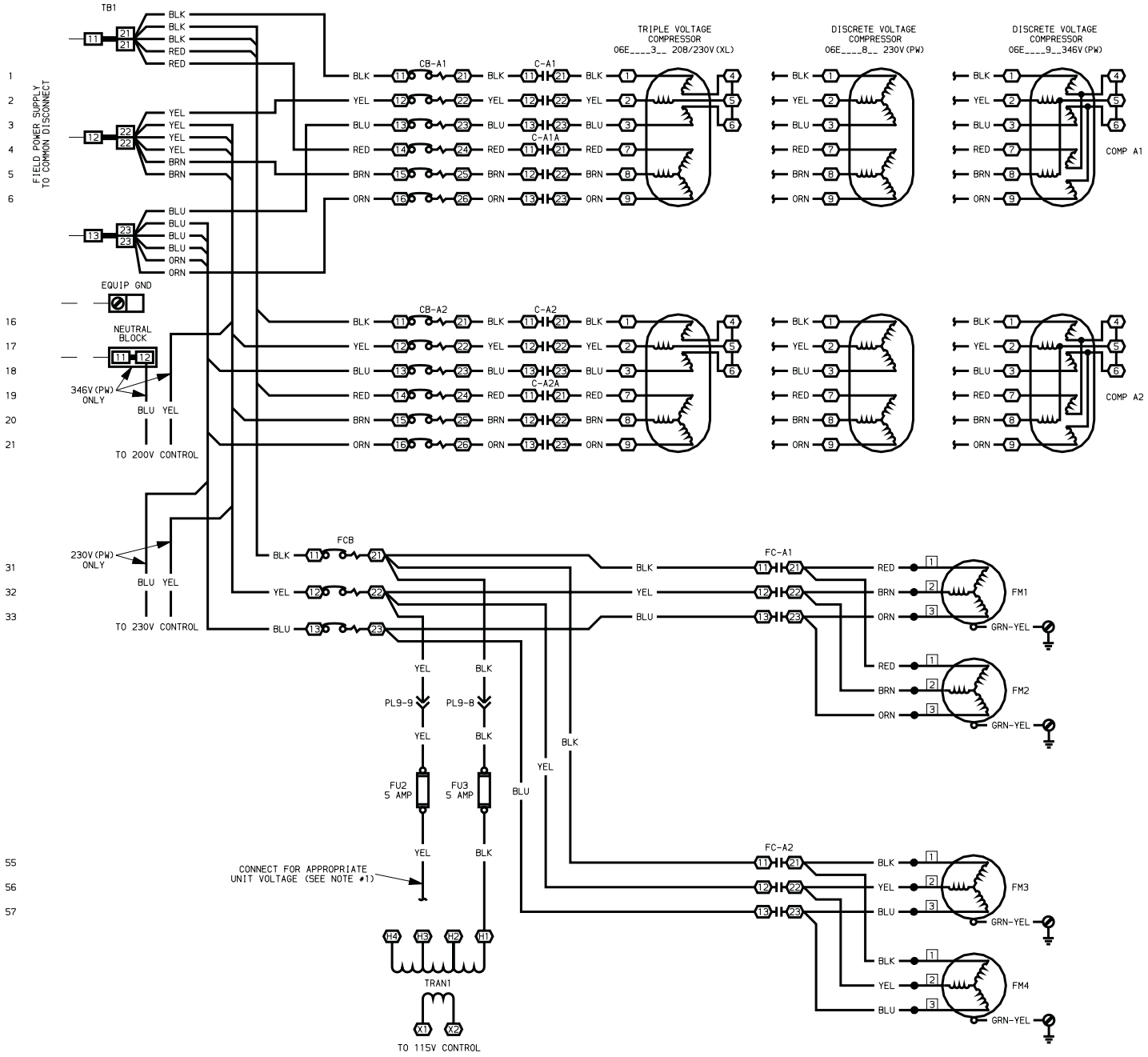


Fig. 12 — Optional Single-Circuit Units Power Label Diagram — Units 38AH044-064; 208/230-3-60, 346-3-50, 230-3-50

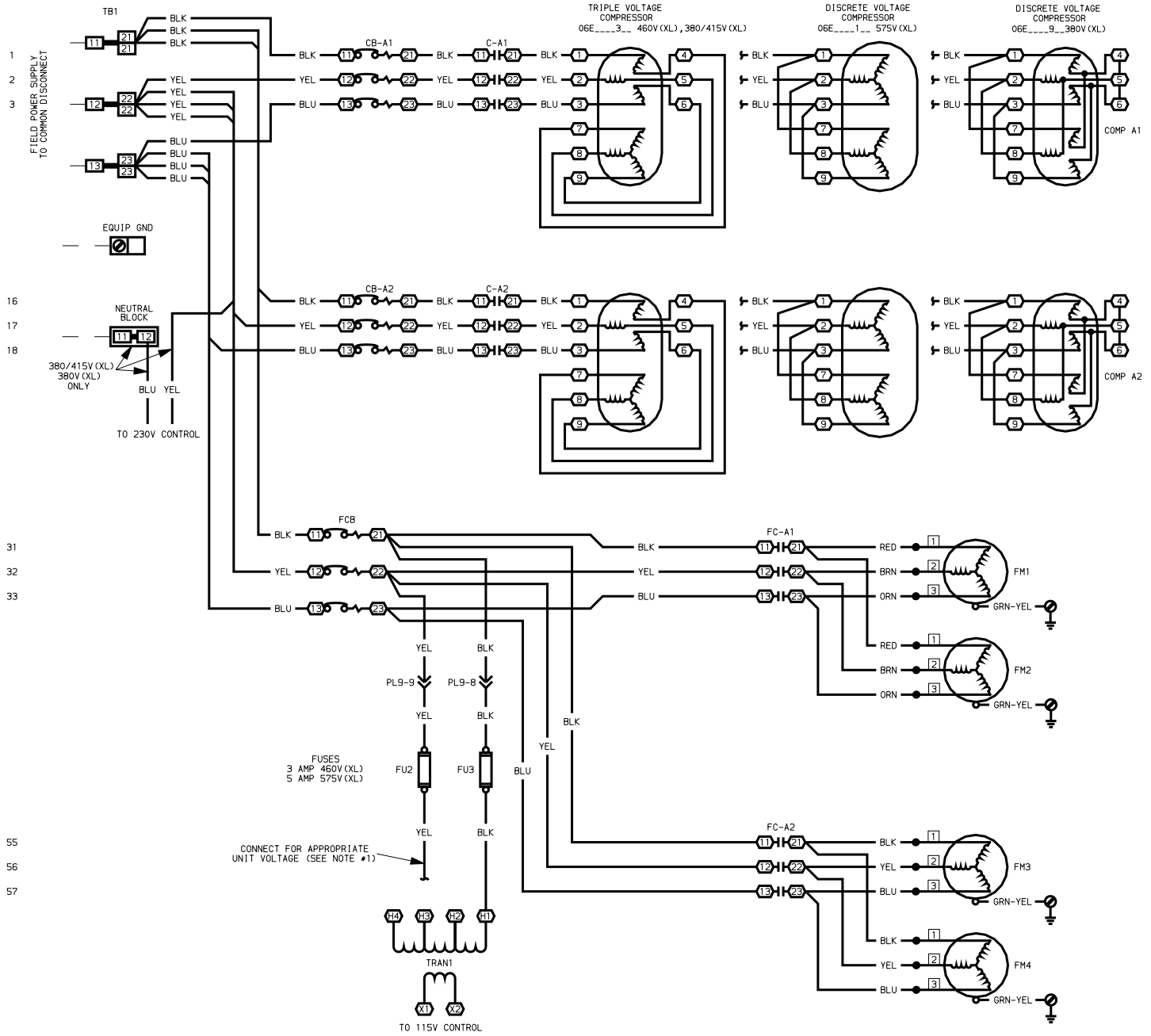


Fig. 13 — Optional Single-Circuit Units Power Label Diagram — Units 38AH044-064; 460-3-60, 575-3-60, 380-3-60, 380/415-3-50

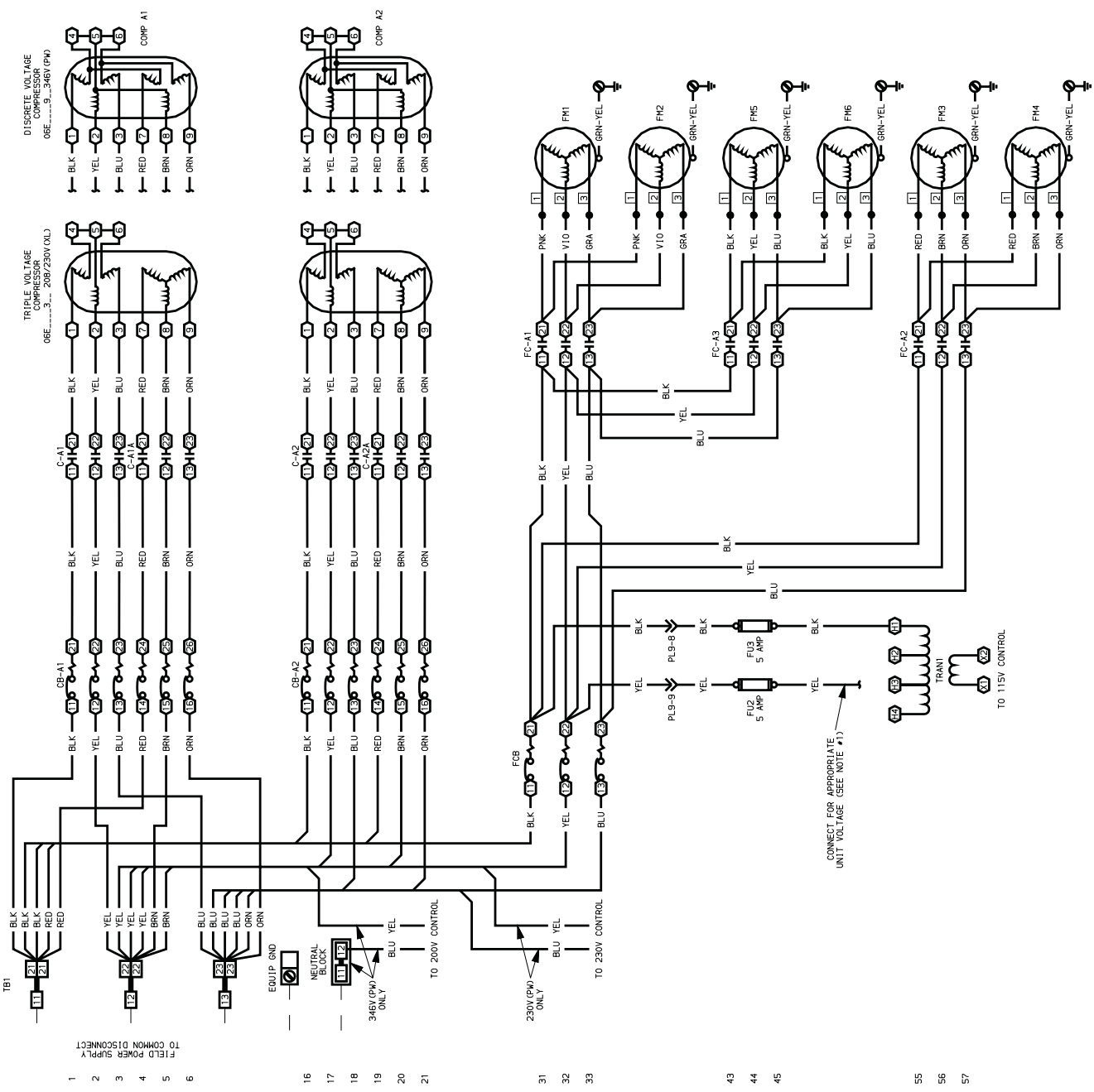
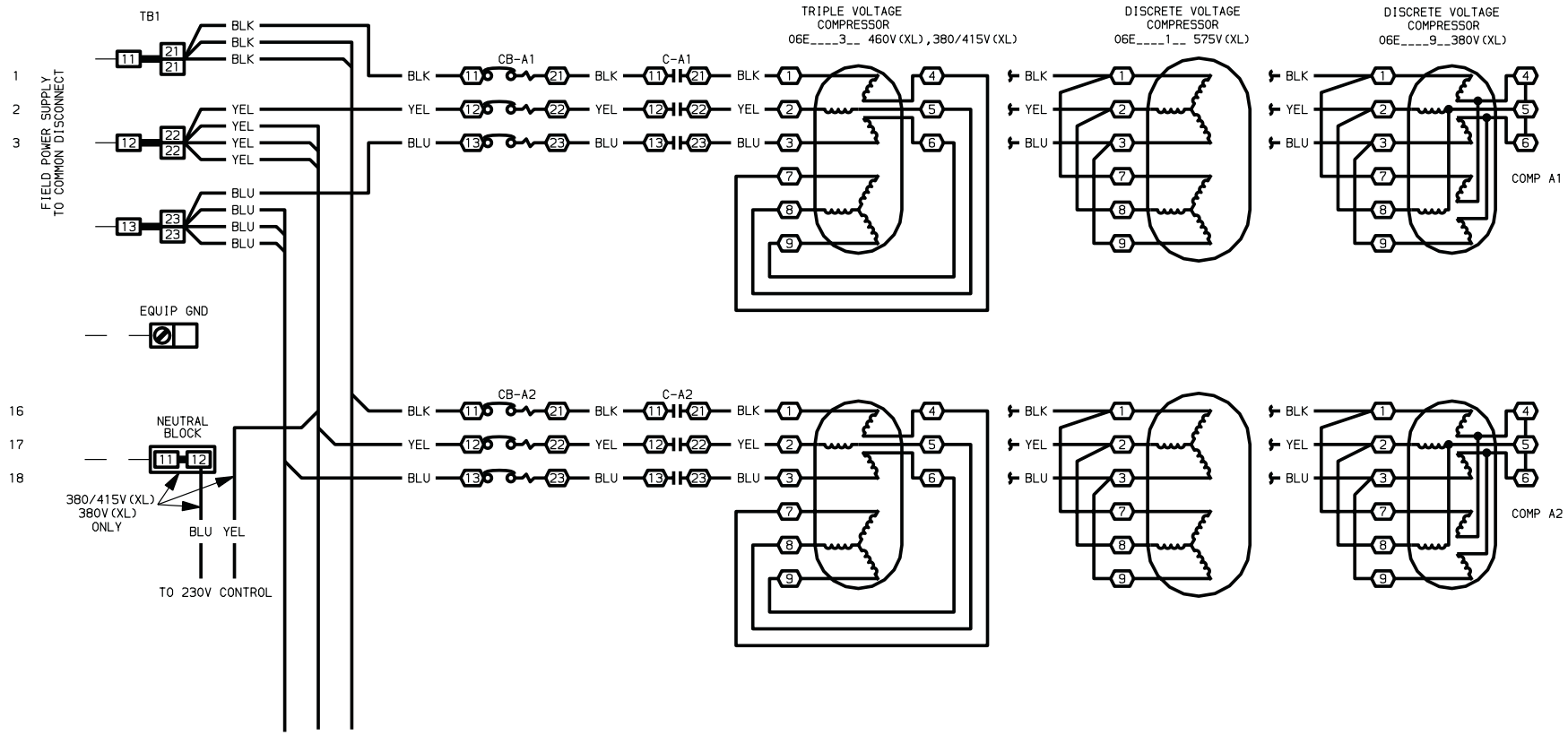


Fig. 14 — Optional Single-Circuit Units Power Label Diagram — Units 38AH074,084; 208/230-3-60, 346-3-50



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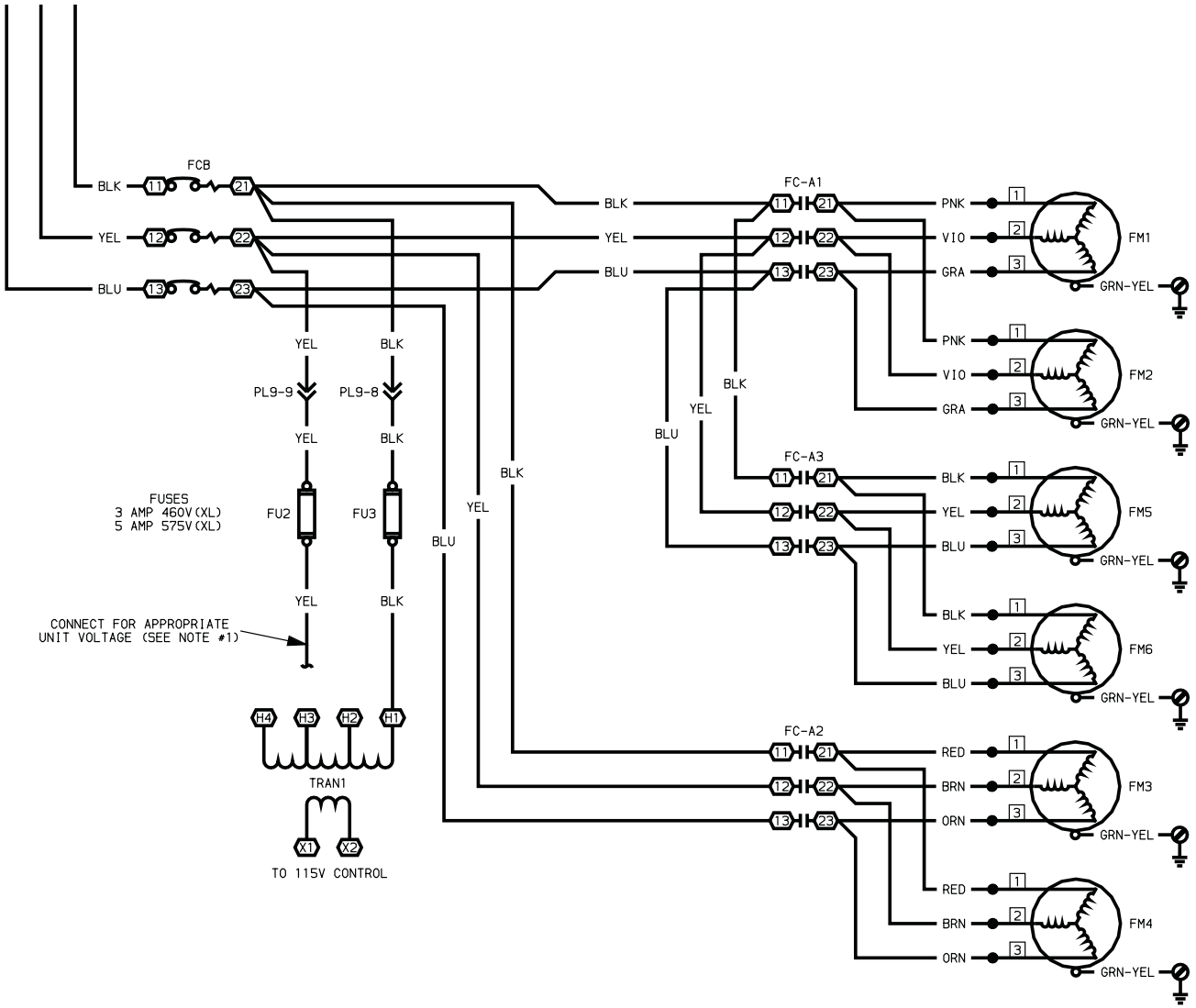
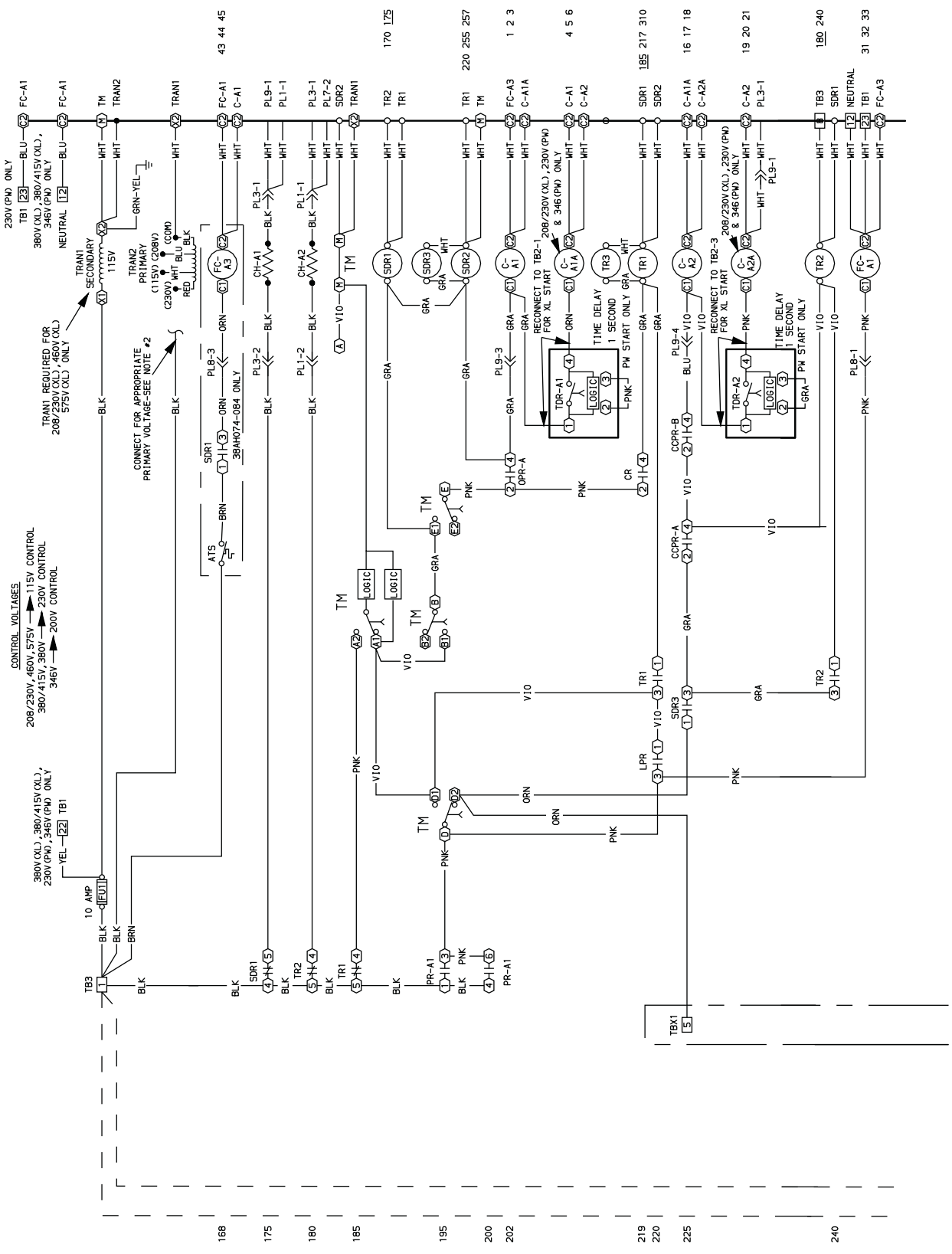
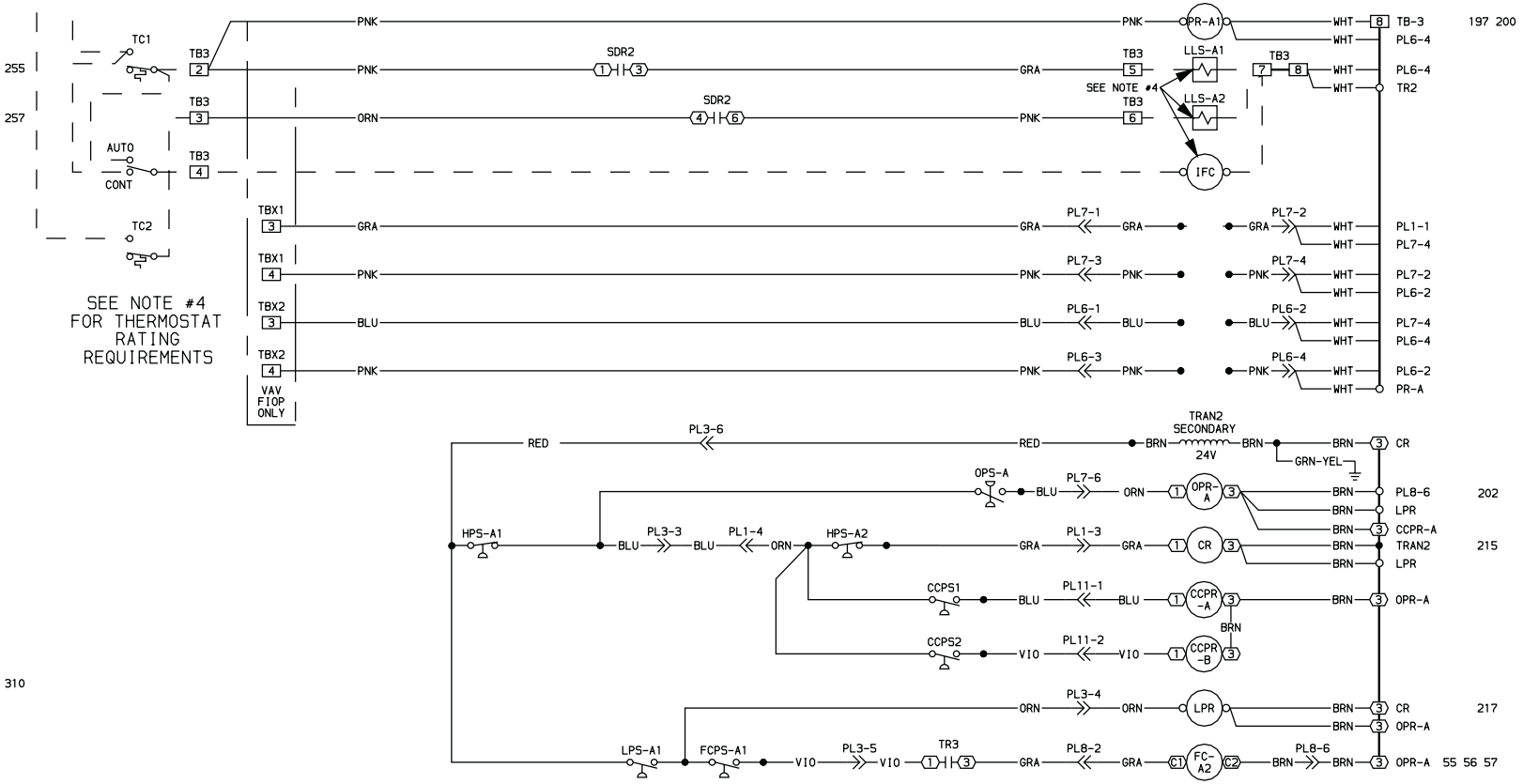


Fig. 15 — Optional Single-Circuit Units Power Label Diagram — Units 38AH074, 084; 460-3-60, 575-3-60, 380-3-60, 380/415-3-50

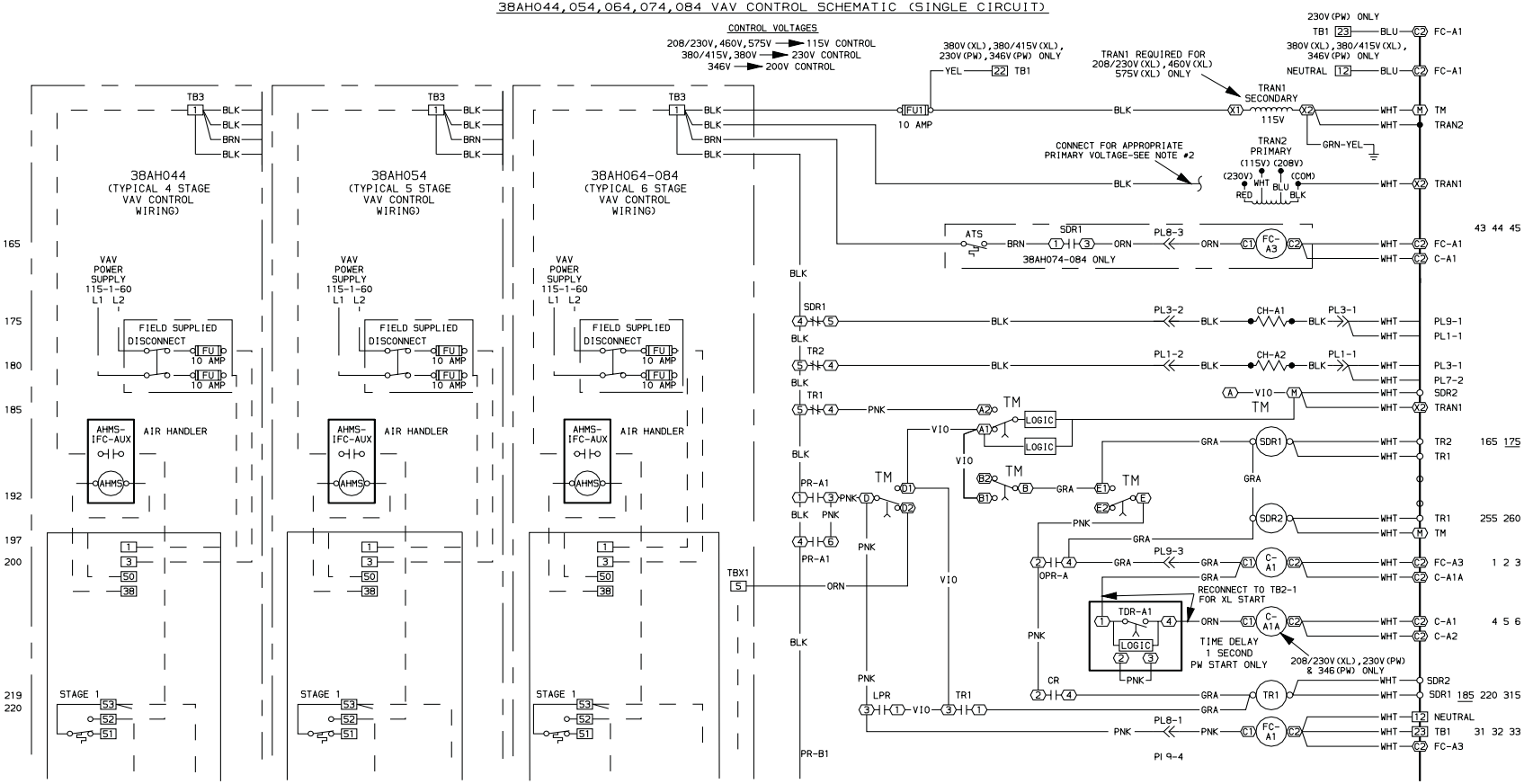

CONTROL VOLTAGES
208/230V, 460V, 575V — 115V CONTROL
380/415V, 380V — 230V CONTROL
346V — 200V CONTROL
380V(XL), 380/415V(XL), 230V(PW), 346V(PW) ONLY
YEL 22 TB1
10 AMP FU1
TB3
TRAN1 REQUIRED FOR 208/230V(XL), 460V(XL) 575V(XL) ONLY
TRAN1 SECONDARY
TRAN2 PRIMARY
CONNECT FOR APPROPRIATE PRIMARY VOLTAGE-SEE NOTE #2
ATS
SDR1
39AH074-084 ONLY
TM
LOGIC
PR-A1
OPR-A
CR
CCPR-A
CCPR-B
LPR
TDR-A1
TDR-A2
TIME DELAY 1 SECOND PW START ONLY
RECONNECT TO TB2-1 FOR XL START
208/230V(XL), 230V(PW) & 346(PW) ONLY
RECONNECT TO TB2-3 FOR XL START
208/230V(XL), 230V(PW) & 346(PW) ONLY
TBX1
230V(PW) ONLY
380V(XL), 380/415V(XL), 346V(PW) ONLY
NEUTRAL
Continued on next page



ALL NOTES ARE LOCATED ON THE COMPONENT ARRANGEMENT

Fig. 16 — Optional Single-Circuit Units Control Label Diagram, All Voltages

38AH044,054,064,074,084 VAV CONTROL SCHEMATIC (SINGLE CIRCUIT)



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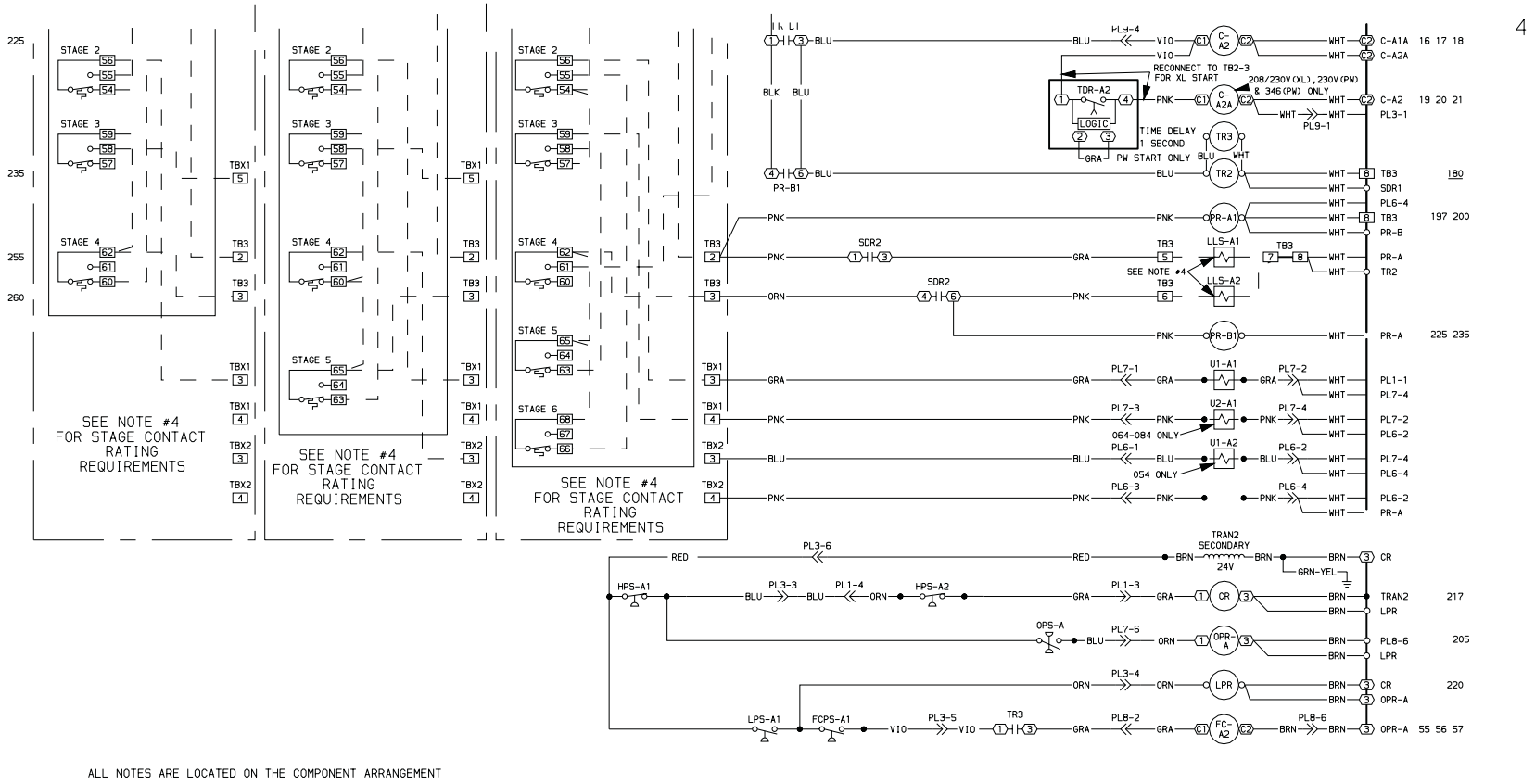
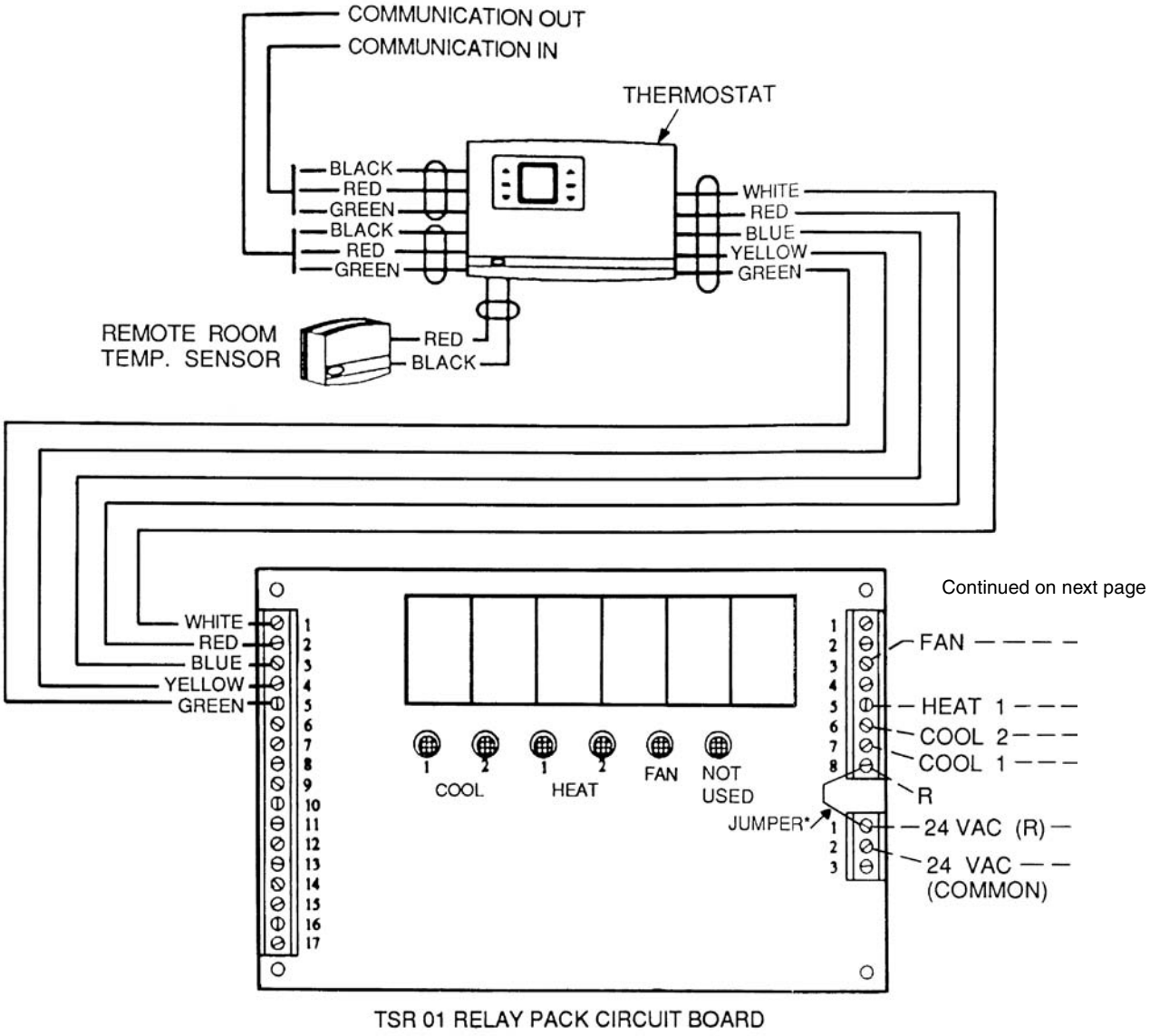

SEE NOTE #4 FOR STAGE CONTACT RATING REQUIREMENTS
SEE NOTE #4 FOR STAGE CONTACT RATING REQUIREMENTS
SEE NOTE #4 FOR STAGE CONTACT RATING REQUIREMENTS
RECONNECT TO TB2-3 FOR XL START
208/230V(XL),230V(PW) & 346(PW) ONLY
TIME DELAY 1 SECOND
PW START ONLY
064-084 ONLY
054 ONLY
SEE NOTE #4
TRAN2 SECONDARY
24V
GRN-YEL
ALL NOTES ARE LOCATED ON THE COMPONENT ARRANGEMENT

Fig. 17 — Optional Single-Circuit Units, Variable Air Volume Control Label Diagram,with Typical Modupanel™ Control Wiring, All Voltages



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TSR 01 RELAY PACK CIRCUIT BOARD

LEGEND

C — Compressor Contactor
CR — Control Relay
H — Heating Relay (field-supplied 24-v sealed coil, 10 va maximum rating)
HD — Heating Device
IFC — Indoor-Fan Contactor
IFR — Indoor-Fan Relay
LLS — Liquid Line Solenoid
SDR — Solenoid Drop Relay
TB — Terminal Block
TR — Timer Relay
——— Factory Wiring
– – – – Field Wiring

*Jumper removed only when separate 24-v transformer power source is used to power the TSR-01 relay pack.
†To control heating device and provide automatic indoor-fan operation on heating.

NOTES:
1. Liquid line solenoid valve LLS-1 is used for solenoid drop.
2. Solenoid drop is a safety feature which prevents refrigerant migration to the compressor during the OFF cycle. It is recommended on all systems and required on systems where piping exceeds 75 ft in length.
3. Liquid line solenoid valve LLS-2 is used for capacity control.
4. TSR-01 relay pack uses 10 va. Internal relay contacts are rated for 1 amp/24 vac.

Fig. 18 — Control Circuit Wiring with 24-V Accessory and One 2-Stage Carrier Communications Temperature Monitor, All Voltages (Single-Circuit Units)

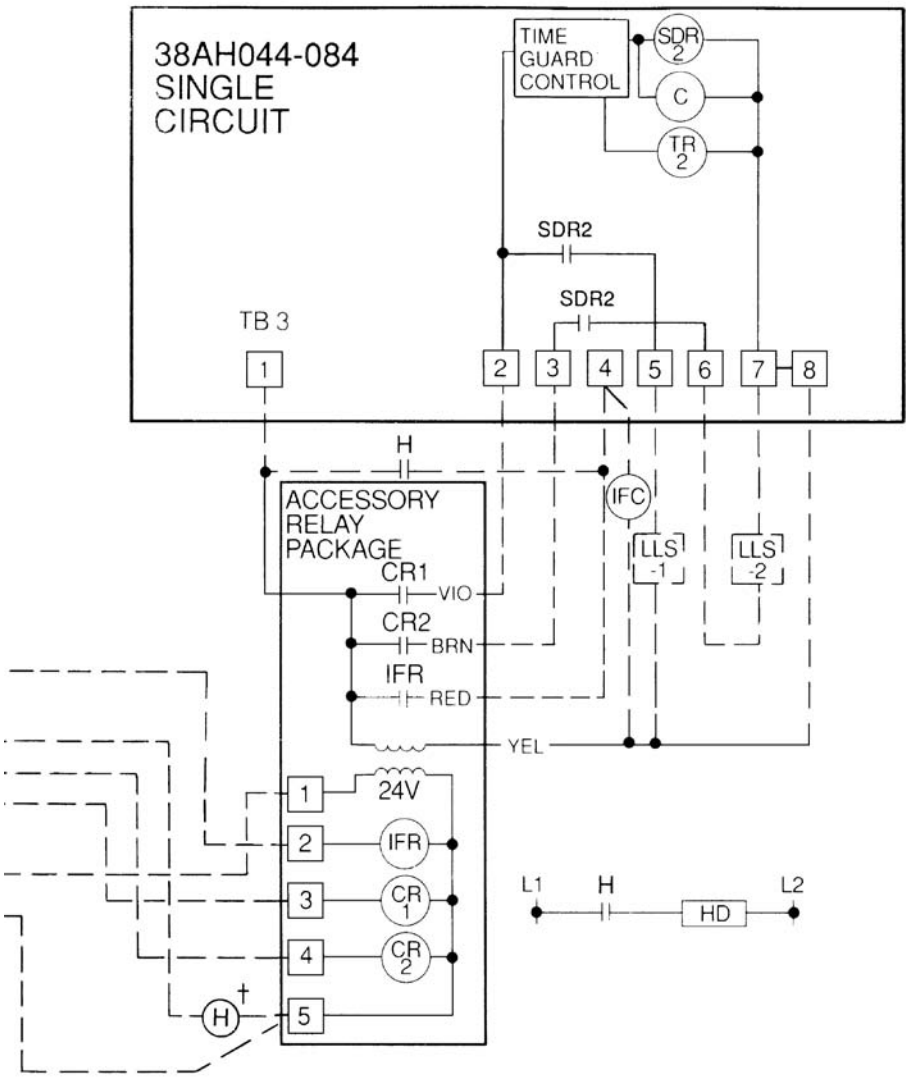


Fig. 18 — Control Circuit Wiring with 24-V Accessory and One 2-Stage Carrier Communications Temperature Monitor, All Voltages (Single-Circuit Units) (cont)

MOTORMASTER® III CONTROL INSTALLATION

Before installing Motormaster III control, refer to general information in Installation Instructions shipped with the control. Comply with the following instructions when applying Motormaster III control to 38AH044-084 units. Refer to Table 1 for usage and unit modification data.

Table 1 — Minimum Operating Temperatures

UNIT 38AH	TEMPERATURE			
	Without Motormaster III Control		With Motormaster III Control	
	F	C	F	C
044,054	50	10	–20	–29
064-084	35	7.1	–20	–29

Required Changes

STEP 1 — WIND BAFFLES AND BRACKETS — Wind baffles and brackets must be field fabricated for 38AH units to ensure proper operation at low-ambient temperatures with Motormaster III controls.

STEP 2 — INSTALL MOTORMASTER III CONTROLS — Two Motormaster III controls must be added for each unit, one control per refrigerant circuit. See Motormaster III Installation Instructions for proper control mounting locations.

Sensors — Install sensor for thermistor input control in proper location on condenser coil. See Fig. 19 and Motormaster III Installation Instructions. Connect sensor leads to the purple and gray control signal leads on the Motormaster III control located on the same side of the unit.

Control Signal Selection Switch — Remove the cover of the Motormaster III controller. Set switch on Motormaster III control board (underneath cover) to accept the thermistor sensor input signal. Also, set the frequency selection switch to match to unit power supply (50 Hz or 60 Hz). See Fig. 20 for switch locations and proper position. Replace the cover.

STEP 3 — MAKE ELECTRICAL CONNECTIONS

⚠ WARNING

To avoid possibility of electrical shock and personal injury, turn off all power to unit before making electrical connections. Tag all disconnects to alert others not to turn power on until work is completed.

All the necessary wires required for wiring the Motormaster III controller into the unit wire in the wire harness for the unit.

38AH044-064 Units — Connect the power wires to the controller from the appropriate fan contactor, FC-A1 or FC-B1. Remove the red, brown, and orange wires from the fan motor contactor. Connect the red fan motor wire to the red wire of the controller. Connect the brown fan motor wire to the brown wire of the controller. Connect the orange fan motor wire to the orange wire of the controller. See Fig. 21.

38AH074,084 Units — Connect the power wires to the controller from the appropriate fan contactor, FC-A1 or FC-B1. Remove the red, brown, and orange wires from the fan motor contactor. Connect the red fan motor wire to the red wire of the controller. Connect the brown fan motor wire to brown wire of the controller. Connect the orange fan motor wire to the orange wire of the controller. See Fig. 22.

NOTE: For 38AH units, if primary voltage is 575 v, two transformers (part no. HT01AH851) must be used to lower the supply voltage to the Motormaster III controller to 460 v. See Fig. 23A or B.

All Sizes — When all electrical connections are made, check that they are correct and tight. Restore power to unit. Check the phase sequence indicator on the Motormaster III control. If lighted, turn off power and reverse L1 (black) and L2 (yellow) power leads. Check that fan motors rotate in the proper direction. To change fan rotation, reverse the red and orange output leads to the motor. Replace and secure the control box inner panel. Close and secure the control box door.

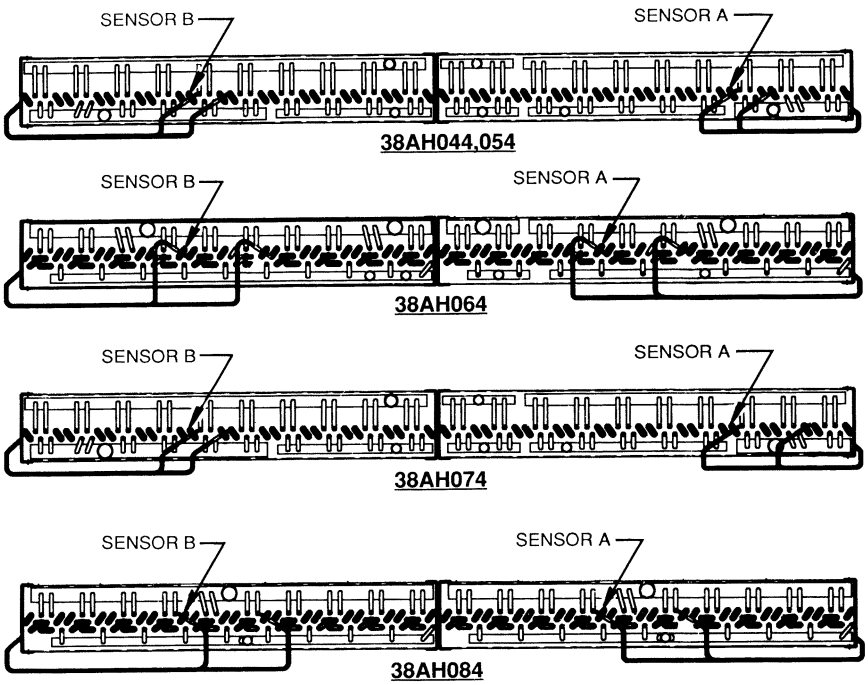
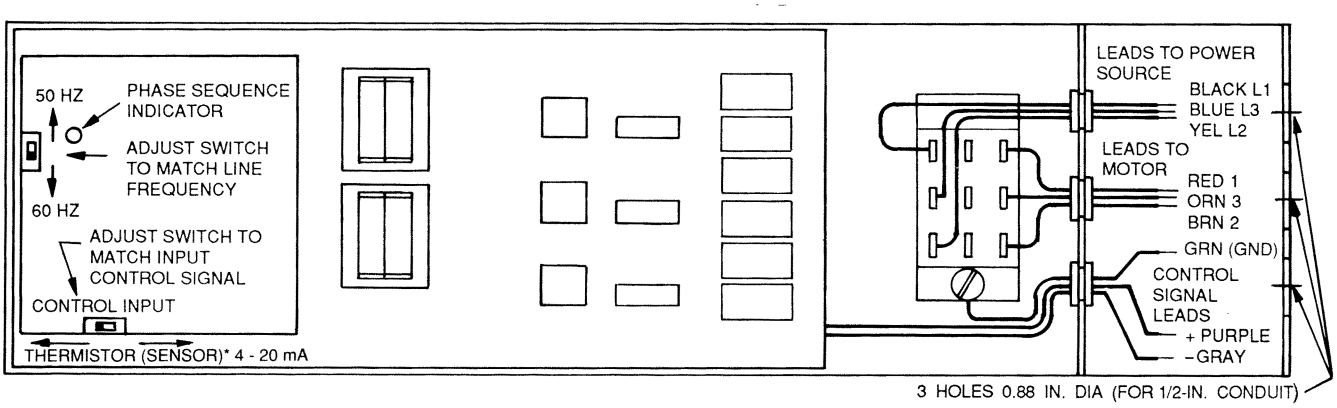


Fig. 19 — Motormaster® III Control Sensor Locations



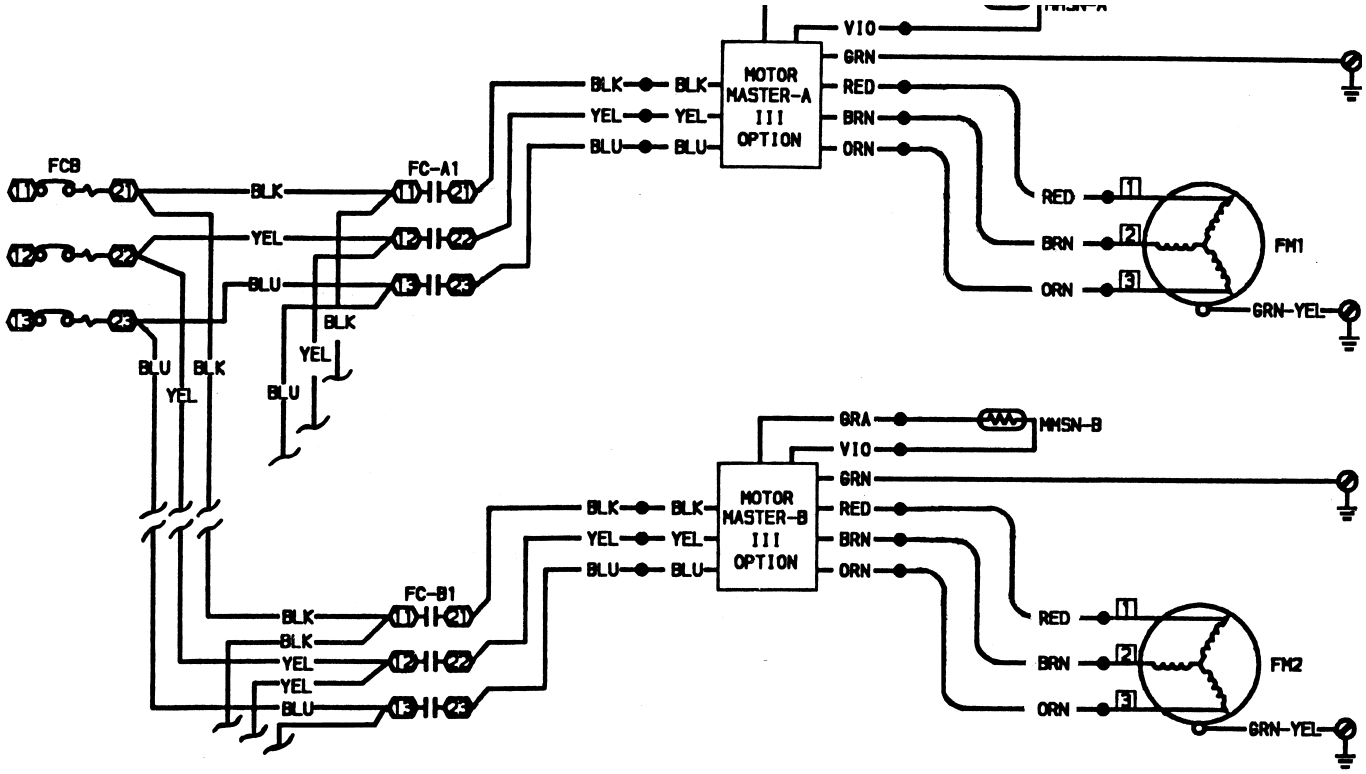
LEGEND

GND — Ground

*For thermistor (sensor) signal, move switch to the left.

NOTE: Thermistor is designated in text as “sensor.”

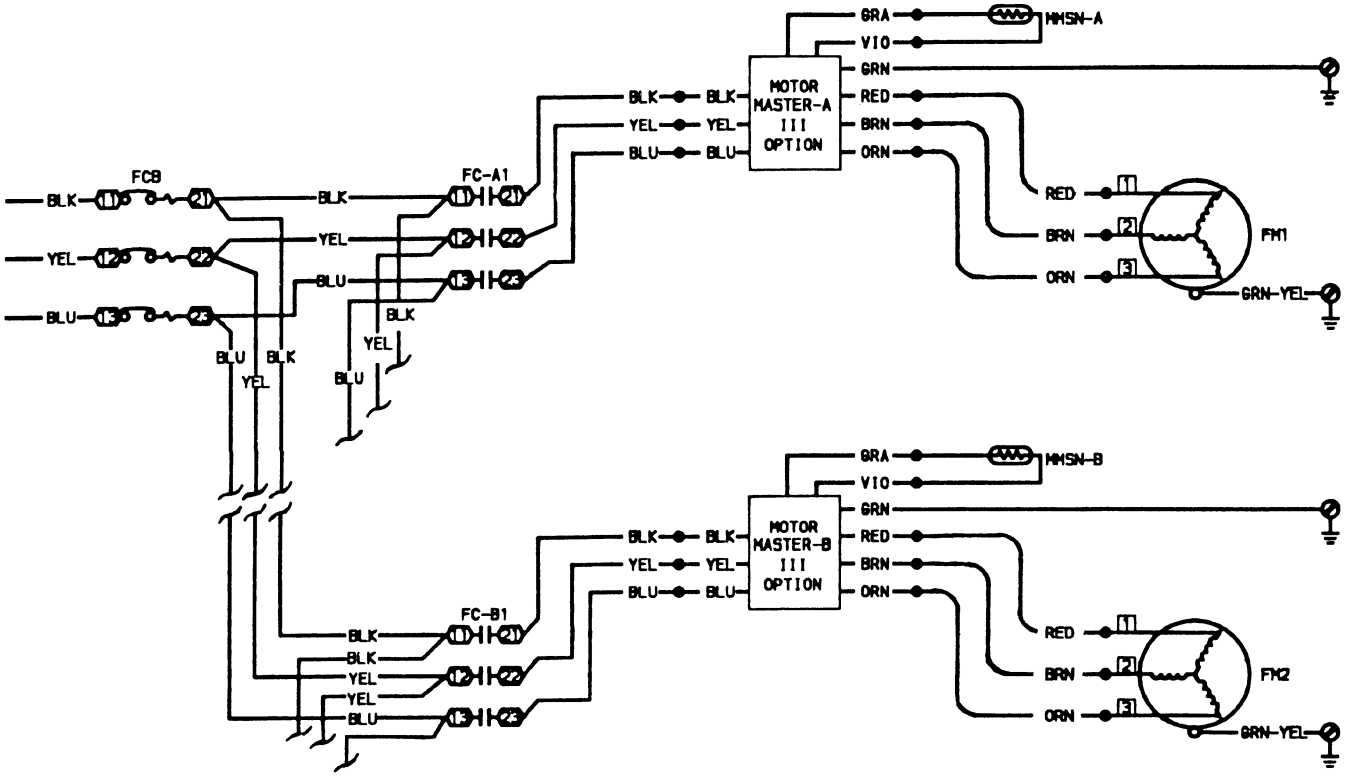
Fig. 20 — Motormaster III Control Signal Selection Switch



LEGEND

FC — Fan Contactor
FCB — Fan Circuit Breaker
FM — Fan Motor
MMSN — Motormaster Sensor

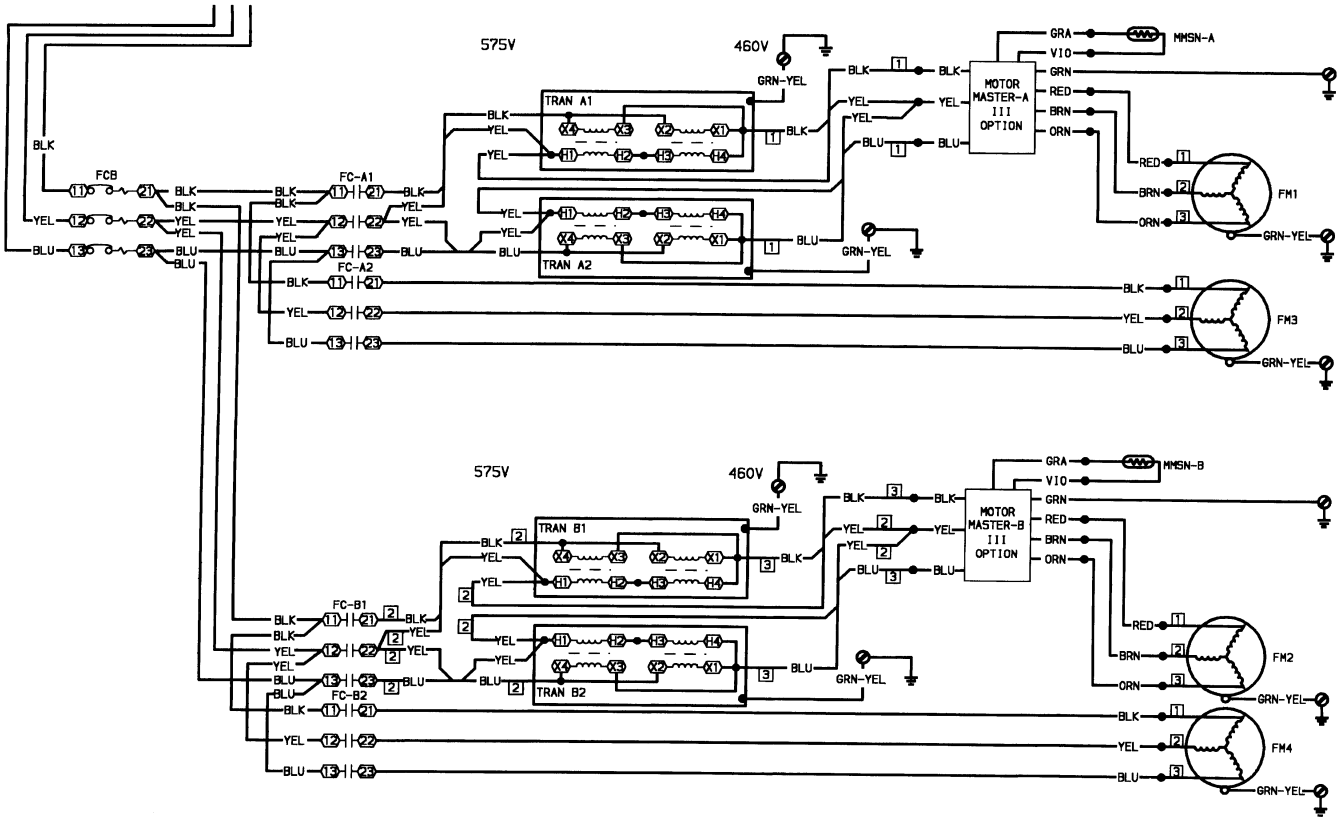
Fig. 21 — Motormaster® III Control Fan Power Wiring — Units 38AH044-064



LEGEND

FC — Fan Contactor
FCB — Fan Circuit Breaker
FM — Fan Motor
MMSN — Motormaster Sensor

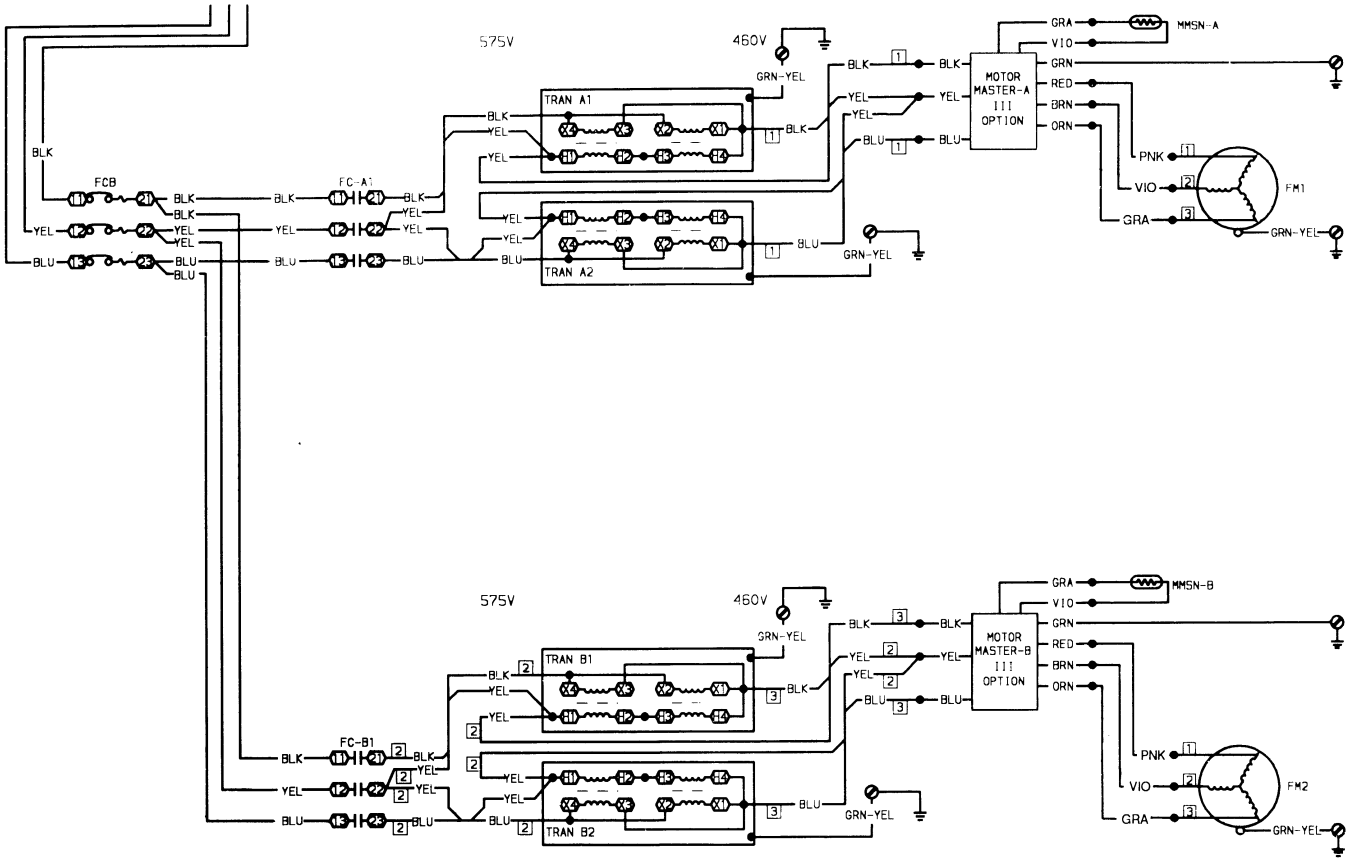
Fig. 22 — Motormaster® III Control Fan Power Wiring — Units 38AH074, 084



LEGEND

FC — Fan Contactor
FCB — Fan Circuit Breaker
FM — Fan Motor
MMSN — Motormaster Sensor
TRAN — Transformer

Fig. 23A — Motormaster® III Control 575-v Units, Autotransformer Circuit — Units 38AH044-064



LEGEND

FC — Fan Contactor
FCB — Fan Circuit Breaker
FM — Fan Motor
MMSN — Motormaster Sensor
TRAN — Transformer

Fig. 23B — Motormaster® III Control 575-v Units, Autotransformer Circuit — Units 38AH074, 084

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